

EWP PRODUCT GUIDE

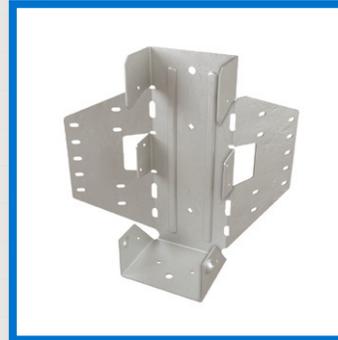


LIMIT
STATES
DESIGN

For Use With Products Manufactured by



SKH2520R-2



LSSH35



THF12514



TFL25118

Canadian Specifiers Guide

MiTek®

1-800-268-3434
MiTek.ca

©2020 MiTek Inc. All Rights Reserved. #994-11/2020

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 Douglas Fir-Larch (DF-L), or Microllam® LVL, Parallam® PSL, or TimberStrand® LSL. Joist reaction should be checked by a qualified designer to ensure proper hanger selection.
- 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 Pliers:** 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: ½:12 for seat bearing lengths of 2½" or less; ¾:12 for bearing lengths between 2½" and 3½"; and ¼:12 for bearing lengths in excess of 3½".

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

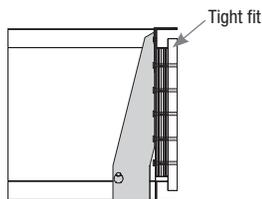
(Refer to TrusJoist documents TJ-4500 and TJ-4510)

TJI®	110		210		230 or 360		360	s31 or s33		s47 or 560			
Depth	9-1/2"-11-7/8"	14"	9-1/2"-11-7/8"	14"-16"	9-1/2"-11-7/8"	14"-16"	18"-20"	9-1/2"-11-7/8"	14"-16"	9-1/2"-11-7/8"	14"-16"	18"-20"	
Filler Block ¹	2x6	2x8	2x6 + 3/8" sheathing	2x8 + 3/8" sheathing	2x6 + 1/2" sheathing	2x8 + 1/2" sheathing	2x12 + 1/2" sheathing	2x6 + 5/8" sheathing	2x8 + 5/8" sheathing	Two 2x6	Two 2x8	Two 2x12	
Backer Block ¹	5/8" or 3/4"		3/4" or 7/8"		7/8" or 1" net			1" net		2x6	2x8	2x12	
Nail Size	Filler	10d (0.128" x 3")											
	Backer	16d (0.135" x 3-1/2") 10d (0.128" x 3")											
Nail Qty ²	Filler	15						15 each side					
	Backer							15					

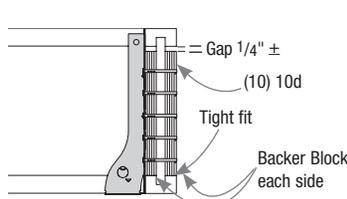
1) If necessary, increase filler and backer block height for face mount hangers and maintain 1/8" gap at top of joist. See Web Stiffener Attachment detail.

Filler and backer block dimensions should accommodate required nailing without splitting. The suggested minimum length is 24" for filler and 12" for backer blocks.

2) Clinch nails when possible.

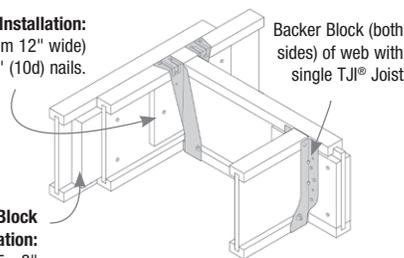


Typical THO (top mount) backer block installation



Typical THF (face mount) backer block installation

Backer Block Installation:
(minimum 12" wide)
Nail with 15 - 3" (10d) nails.



With top flange hangers, backer block required only for factored downward loads exceeding 350 lbs or for uplift conditions

Web Stiffener Attachment

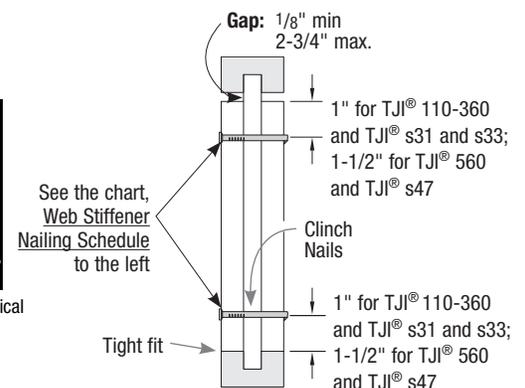
(Refer to TrusJoist documents TJ-4500 and TJ-4510)

Web Stiffeners are optional except as noted below:

- Web stiffeners required at bearing locations for 18" & 20" deep joists.
- Web stiffeners are always required in hangers that do not extend up to support the top flange of the I-joist. Web stiffeners may be required with certain sloped or skewed hangers or to achieve uplift values. Refer to MiTek's installation requirements.

TJI®	Min. Web Stiffener Size	Nailing Requirements	
		Type	Qty
110	5/8" x 2-5/16" ¹	8d (0.113" x 2-1/2")	3
210	3/4" x 2-5/16" ¹		
230, 360	7/8" x 2-5/16" ¹		
s31, s33	1" x 2-5/16"	16d (0.135" x 3-1/2")	3
s47, 560	2x4 ²		

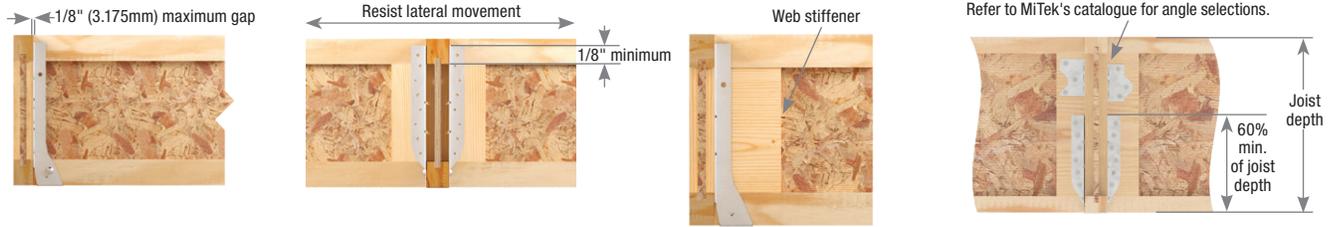
1) CSA standards 0151, 0325, or 0437 with face grain vertical
2) Construction grade or better



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. Hangers for joists **with web stiffeners**

must support a minimum of 60% of joist depth or potential joist rotation must be addressed.



(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

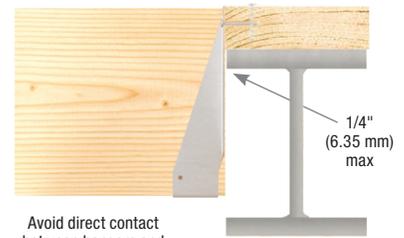
Correct Hanger Attachment to Nailer

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.



Avoid direct contact between hangers and steel beams which may cause squeaks

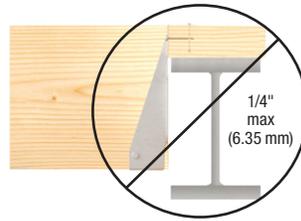
Correct Attachment

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

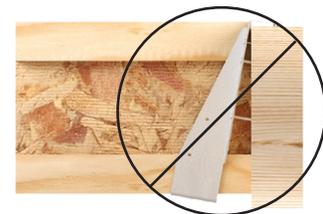
The thickness of the hanger metal and nail heads on top mount hangers must be evaluated for the effect on subsequent sheathing. Ensure that the top mount hanger is installed so the flanges of the hanger are not over-spread which tends to elevate the supported I-Joist, causing uneven floor surfaces and 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 ^{4,7}								Face Mount Hangers								
	MiTek Stock No. ¹	Length of Hanger Seat (in)	Fastener Schedule ⁵				Down ² 100%	Uplift ³ 115%	MiTek Stock No. ¹	Length of Hanger Seat (in)	Min / Max	Fastener Schedule ⁵				Down ² 100%	Uplift ³ 115%
			Header		Joist							Header		Joist			
			Qty	Type	Qty	Type						Qty	Type	Qty	Type		
TJI® 110																	
Joist Width = 1-3/4"																	
9-1/2	TH017950	2	6	10d	2	10d x 1-1/2	1860	490	IHFL17925	2-1/2	--	8	10d	--	--	3240	90
11-7/8	TH017118	2	6	10d	2	10d x 1-1/2	1860	490	IHFL17112	2-1/2	--	10	10d	--	--	4420	90
14	TFL1714	2	6	10d	2	10d x 1-1/2	2305	265	IHFL1714	2-1/2	--	12	10d	--	--	4420	90
TJI® 210																	
Joist Width = 2-1/16"																	
9-1/2	TFL2095	2	6	10d	2	10d x 1-1/2	2305	265	IHFL20925	2-1/2	--	8	10d	--	--	3240	90
11-7/8	TFL20118	2	6	10d	2	10d x 1-1/2	2305	265	IHFL20112	2-1/2	--	10	10d	--	--	4420	90
14	TFL2014	2	6	10d	2	10d x 1-1/2	2305	265	IHFL2014	2-1/2	--	12	10d	--	--	4420	90
16	TFL2016	2	6	10d	2	10d x 1-1/2	2305	265	IHFL2016	2-1/2	--	14	10d	--	--	4420	90
TJI® 230																	
Joist Width = 2-5/16"																	
9-1/2	TFL2395	2	6	10d	2	10d x 1-1/2	2305	265	IHFL23925	2-1/2	--	8	10d	--	--	3240	90
11-7/8	TFL23118	2	6	10d	2	10d x 1-1/2	2305	265	IHFL23112	2-1/2	--	10	10d	--	--	4420	90
14	TFL2314	2	6	10d	2	10d x 1-1/2	2305	265	IHFL2314	2-1/2	--	12	10d	--	--	4420	90
16	TFL2316	2	6	10d	2	10d x 1-1/2	2305	265	IHFL2316	2-1/2	--	14	10d	--	--	4420	90
TJI® 360																	
Joist Width = 2-5/16"																	
9-1/2	TFL2395	2	6	10d	2	10d x 1-1/2	2305	265	IHFL23925	2-1/2	--	8	10d	--	--	3240	90
11-7/8	TFL23118	2	6	10d	2	10d x 1-1/2	2305	265	IHFL23112	2-1/2	--	10	10d	--	--	4420	90
14	TFL2314	2	6	10d	2	10d x 1-1/2	2305	265	IHFL2314	2-1/2	--	12	10d	--	--	4420	90
16	TFL2316	2	6	10d	2	10d x 1-1/2	2305	265	IHFL2316	2-1/2	--	14	10d	--	--	4420	90
18	TFI3518	2-1/2	6	16d	2	10d x 1-1/2	3220	505	IHFL2316	2-1/2	--	14	10d	--	--	4420	90
20	TFI3520	2-1/2	6	16d	2	10d x 1-1/2	3220	505	IHFL2316	2-1/2	--	14	10d	--	--	4420	90
TJI® s31 & TJI® s33																	
Joist Width = 2-1/2"																	
9-1/2	TFL2595	2	6	10d	2	10d x 1-1/2	2305	265	THFI2595	2	--	8	10d	--	--	2345	235
11-7/8	TFL25118	2	6	10d	2	10d x 1-1/2	2305	265	THFI25118	2	--	10	10d	--	--	2345	235
14	TFL2514	2	6	10d	2	10d x 1-1/2	2305	265	THFI2514	2	--	12	10d	--	--	4605	235
16	TFL2516	2	6	10d	2	10d x 1-1/2	2305	265	IHFL2516	2-1/2	Min	14	10d	--	--	4420	90
										Max			2	10d x 1-1/2			405
TJI® s47 & TJI® 560																	
Joist Width = 3-1/2"																	
9-1/2	TH035950	2-3/8	10	10d	2	10d x 1-1/2	2950	485	IHFL35925	2-1/2	Min	10	10d	--	--	4420	90
										Max			2	10d x 1-1/2			405
11-7/8	TH035118	2-3/8	10	10d	2	10d x 1-1/2	2950	485	IHFL35112	2-1/2	Min	10	10d	--	--	4420	90
										Max			2	10d x 1-1/2			405
14	TH035140	2-3/8	12	10d	2	10d x 1-1/2	3910	485	IHFL3514	2-1/2	Min	12	10d	--	--	4420	90
										Max			2	10d x 1-1/2			405
16	TH035160	2-3/8	12	10d	2	10d x 1-1/2	3910	485	IHFL3516	2-1/2	Min	14	10d	--	--	4420	90
										Max			2	10d x 1-1/2			405
18	TFI418	2-1/2	6	16d	2	10d x 1-1/2	3220	505	IHFL3516	2-1/2	Min	14	10d	--	--	4420	90
										Max			2	10d x 1-1/2			405
20	TFI420	2-1/2	6	16d	2	10d x 1-1/2	3220	505	IHFL3516	2-1/2	Min	14	10d	--	--	4420	90
										Max			2	10d x 1-1/2			405

- 1) Shaded hangers require web stiffeners at joist ends. Web stiffeners may be required for non-shaded hangers by Weyerhaeuser.
- 2) Factored resistances listed are based on hanger attachment to a DF-L species solid sawn, TJI® Joist or Microllam® LVL, Parallam® PSL, or TimberStrand® LSL header. Contact your local Weyerhaeuser or MiTek for additional duration of load values.
- 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" diameter x 1-1/2" long, 10d nails are 0.148" diameter x 3" long, and 16d nails are 0.162" diameter x 3-1/2" long. 16d sinkers are 0.148" diameter x 3-1/4" long and may be used where 10d commons are specified.
- 6) Hangers utilizing 16d nails are not compatible with TJI® joists.
- 7) For top mount hangers supported by I-Joist headers with a flange thickness less than 1-1/2", consult MiTek and Weyerhaeuser for hanger limitations.



THO



TFL



TFI



THFI



IHFL

Hanger Factored Resistance (Lbs)

Joist Height	Adjustable Height Hangers								Skewed 45° Hangers								
	MiTek Stock No. ^{1,7,9}	Length of Hanger Seat (in)	Fastener Schedule ⁴				Down ² 100%	Uplift ³ 115%	MiTek Stock No. ¹	Length of Hanger Seat (in)	Min/Max	Fastener Schedule ⁴				Down ² 100%	Uplift ³ 115%
			Header		Joist							Header		Joist			
			Qty	Type	Qty	Type						Qty	Type	Qty	Type		
TJI® 110																	
Joist Width = 1-3/4"																	
9-1/2	MSH1722	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH1720L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
11-7/8	MSH1722	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH1720L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
14	MSH1722	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH1724L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
TJI® 210																	
Joist Width = 2-1/16"																	
9-1/2	MSH2022	1-3/4	6	10d	4	10d	3370	--	SKH2020L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
11-7/8	MSH2022	1-3/4	6	10d	4	10d	3370	--	SKH2020L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
14	MSH2022	1-3/4	6	10d	4	10d	3370	--	SKH2024L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
16	MSH2022	1-3/4	6	10d	4	10d	3370	--	SKH2024L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
TJI® 230																	
Joist Width = 2-5/16"																	
9-1/2	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
11-7/8	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
14	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
16	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
TJI® 360																	
Joist Width = 2-5/16"																	
9-1/2	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
11-7/8	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
14	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
16	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
18	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
20	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	--	--	--	--	--	--	--	--	
TJI® s31 & TJI® s33																	
Joist Width = 2-1/2"																	
9-1/2	MSH322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2520L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
11-7/8	MSH322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2520L/R	1-7/8	--	14	10d	10	10d x 1-1/2	3440	2855
14	MSH322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2524L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
16	MSH322	1-3/4	6	10d	4	10d x 1-1/2	3370	--	SKH2524L/R	1-7/8	--	16	10d	10	10d x 1-1/2	4640	2855
TJI® s47 & TJI® 560																	
Joist Width = 3-1/2"																	
9-1/2	MSH422	1-3/4	6	10d	6	10d	3215	--	HD410_SK45L/R_BV ^{6,8}	2-1/2	Min	14	16d	6	10d	5030	1845
											Max	20		10		5870	3055
11-7/8	MSH422	1-3/4	6	10d	6	10d	3215	--	HD410_SK45L/R_BV ^{6,8}	2-1/2	Min	14	16d	6	10d	5030	1845
											Max	20		10		5870	3055
14	MSH422	1-3/4	6	10d	6	10d	3215	--	HD414_SK45L/R_BV ^{6,8}	2-1/2	Min	18	16d	8	10d	5030	2080
											Max	26		12		7540	3055
16	MSH422	1-3/4	6	10d	6	10d	3215	--	HD414_SK45L/R_BV ^{6,8}	2-1/2	Min	18	16d	8	10d	5030	2080
											Max	26		12		7540	3055
18	MSH422	1-3/4	6	10d	6	10d	3215	--	HD414_SK45L/R_BV ^{6,8}	2-1/2	Min	18	16d	8	10d	5030	2080
											Max	26		12		7540	3055
20	MSH422	1-3/4	6	10d	6	10d	3215	--	HD414_SK45L/R_BV ^{6,8}	2-1/2	Min	18	16d	8	10d	5030	2080
											Max	26		12		7540	3055

- 1) Shaded hangers require web stiffeners at joist ends.
- 2) Factored resistances listed are based on hanger attachment to a DF-L species solid sawn, TJI® Joist or Microlam® LVL, Parallam® PSL, or TimberStrand® LSL header. Contact your local Weyerhaeuser or MiTek for additional duration of load values.
- 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" diameter x 1-1/2" long, 10d nails are 0.148" diameter x 3" long, and 16d nails are 0.162" diameter x 3-1/2" long. 16d sinkers are 0.148" diameter x 3-1/4" long and may be used where 10d commons are specified.
- 5) Hangers utilizing 16d nails are not compatible with TJI® joists.
- 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 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.
- 8) Hangers are special order. Consult MiTek for pricing and lead times.
- 9) Flanges on the bucket of the hanger may extend above the top of the joist.



Hanger Factored Resistance (Lbs)

Joist Height	Top Mount Hangers ^{4,7}								Face Mount Hangers								
	MiTek Stock No. ¹	Length of Hanger Seat (in)	Fastener Schedule ⁵				Down ² 100%	Uplift ³ 115%	MiTek Stock No. ¹	Length of Hanger Seat (in)	Fastener Schedule ⁵				Down ² 100%	Uplift ³ 115%	
			Header		Joist						Header		Joist				
			Qty	Type	Qty	Type					Qty	Type	Qty	Type			
Double TJI® 110 Joist Width = 3-1/2"																	
9-1/2	TH035950	2-3/8	10	10d	2	10d x 1-1/2	2950	485	IHF35925	2-1/2	Min	10	10d	--	--	4420	90
											Max	24	16d	2	10d x 1-1/2	5655	605
11-7/8	TH035118	2-3/8	10	10d	2	10d x 1-1/2	2950	485	IHF35112	2-1/2	Min	10	10d	--	--	4420	90
											Max	24	16d	2	10d x 1-1/2	5655	605
14	TH035140	2-3/8	12	10d	2	10d x 1-1/2	2950	485	IHF3514	2-1/2	Min	12	10d	--	--	4420	90
											Max	28	16d	2	10d x 1-1/2	5655	605
Double TJI® 210 Joist Width = 4-1/8"																	
9-1/2	TH020950-2	3	10	16d	6	10d	3355	2140	IHF20925-2	2-1/2	Min	10	10d	--	--	3845	90
											Max	24	16d	2	10d	5655	605
11-7/8	TH020118-2	3	10	16d	6	10d	3355	2140	IHF20112-2	2-1/2	Min	10	10d	--	--	3845	90
											Max	24	16d	2	10d	5655	605
14	TH020140-2	3	10	16d	6	10d	3355	2140	IHF2014-2	2-1/2	Min	12	10d	--	--	3845	90
											Max	28	16d	2	10d	5655	605
16	TH020160-2	3	10	16d	6	10d	3355	2140	IHF2014-2	2-1/2	Min	12	10d	--	--	3845	90
											Max	28	16d	2	10d	5655	605
Double TJI® 230 Joist Width = 4-5/8"																	
9-1/2	TH023950-2	3	10	16d	6	10d	3785	2140	IHF23925-2	2-1/2	Min	10	10d	--	--	3845	90
											Max	24	16d	2	10d	5655	605
11-7/8	TH023118-2	3	10	16d	6	10d	3785	2140	THF23118-2	2-1/2	--	16	10d	6	10d	6855	3185
14	TH023140-2	3	12	16d	6	10d	3785	2140	THF23140-2	2-1/2	--	20	10d	6	10d	6680	3185
16	TH023160-2	3	12	16d	6	10d	3785	2140	THF23160-2	2-1/2	--	24	10d	6	10d	6680	3185
Double TJI® 360 Joist Width = 4-5/8"																	
9-1/2	TH023950-2	3	10	16d	6	10d	3785	2140	IHF23925-2	2-1/2	Min	10	10d	2	10d	3845	90
											Max	24	16d	2	10d	5655	605
11-7/8	TH023118-2	3	10	16d	6	10d	3785	2140	THF23118-2	2-1/2	--	16	10d	6	10d	6855	3185
14	TH023140-2	3	12	16d	6	10d	3785	2140	THF23140-2	2-1/2	--	20	10d	6	10d	6680	3185
16	TH023160-2	3	12	16d	6	10d	3785	2140	THF23160-2	2-1/2	--	24	10d	6	10d	6680	3185
18	TH023180-2	3	14	16d	6	10d	3785	2140	THF23160-2	2-1/2	--	24	10d	6	10d	6680	3185
20	TH023200-2	3	14	16d	6	10d	3785	2140	THF23160-2	2-1/2	--	24	10d	6	10d	6680	3185
Double TJI® s31 & TJI® s33 Joist Width = 5"																	
9-1/2	TH025950-2	3	10	16d	6	10d	3785	2140	IHF25925-2	2-1/2	Min	10	10d	--	--	3845	90
											Max	24	16d	2	10d x 1-1/2	5655	605
11-7/8	TH025118-2	3	10	16d	6	10d	3785	2140	IHF25112-2	2-1/2	Min	10	10d	--	--	3845	90
											Max	24	16d	2	10d x 1-1/2	5655	605
14	TH025140-2	3	12	16d	6	10d	3785	2140	THF25140-2	2-1/2	--	20	10d	6	10d	6680	3185
16	TH025160-2	3	12	16d	6	10d	3785	2140	THF25160-2	2-1/2	--	24	10d	6	10d	6680	3185
Double TJI® s47 & TJI® s60 Joist Width = 7"																	
9-1/2	BPH7195	3	10	16d	6	10d	5060	2935	HD7100	2-1/2	Min	14	16d	6	16d	5030	2460
											Max	18	8	8	3745	3745	
11-7/8	BPH71118	3	10	16d	6	10d	5060	2935	HD7120	2-1/2	Min	16	16d	6	16d	5030	2460
											Max	22	8	8	5585	3930	
14	BPH7114	3	10	16d	6	10d	5060	2935	HD7140	2-1/2	Min	20	16d	8	16d	5030	3745
											Max	26	12	12	7670	4070	
16	BPH7116	3	10	16d	6	10d	5060	2935	HD7160	2-1/2	--	24	16d	8	10d	5585	3930
18	BPH7118	3	10	16d	6	10d	5060	2935	HD7180	2-1/2	--	28	16d	8	10d	7670	3930
20	BPH7120	3	10	16d	6	10d	5055	2935	HD7180	2-1/2	--	28	16d	8	10d	7670	3930

- 1) Shaded hangers require web stiffeners at joist ends. Web stiffeners may be required for non-shaded hangers by Weyerhaeuser.
- 2) Factored resistances listed are based on hanger attachment to a DF-L species solid sawn, TJI® Joist or Microllam® LVL, Parallam® PSL, or TimberStrand® LSL header. Contact your local Weyerhaeuser or MiTek for additional duration of load values.
- 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" diameter x 1-1/2" long, 10d nails are 0.148" diameter x 3" long, and 16d nails are 0.162" diameter x 3-1/2" long. 16d sinkers are 0.148" diameter x 3-1/4" long and may be used where 10d commons are specified.
- 6) Hangers utilizing 16d nails are not compatible with TJI® joists.
- 7) For top mount hangers supported by I-Joist headers with a flange thickness less than 1-1/2", consult MiTek and Weyerhaeuser for hanger limitations.

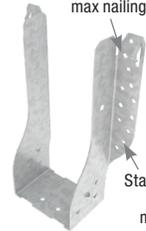


THO



BPH

Additional diamond nail holes for max nailing



Standard round holes for min nailing

IHF



THF

Additional diamond nail holes for max nailing



Standard round holes for min nailing

HD

Hanger Factored Resistance (Lbs)

Joist Height	Adjustable Height Hangers								Skewed 45° Hangers								
	MiTek Stock No. ^{1,5,9}	Length of Hanger Seat (in)	Fastener Schedule ⁴				Down ² 100%	Uplift ³ 115%	MiTek Stock No. ¹	Length of Hanger Seat (in)	Min/Max	Fastener Schedule ⁴				Down ² 100%	Uplift ³ 115%
			Header		Joist							Header		Joist			
			Qty	Type	Qty	Type						Qty	Type	Qty	Type		
Double TJI® 110 Joist Width = 3-1/2"																	
9-1/2	MSH422	1-3/4	6	10d	6	10d	3215	--	HD410_SK45L/R_BV ^{6,8}	2-1/2	Min 14 Max 20	16d	6 10	10d	5030 5870	1845 3055	
11-7/8	MSH422	1-3/4	6	10d	6	10d	3215	--	HD410_SK45L/R_BV ^{6,8}	2-1/2	Min 14 Max 20	16d	6 10	10d	5030 5870	1845 3055	
14	MSH422	1-3/4	6	10d	6	10d	3215	--	HD414_SK45L/R_BV ^{6,8}	2-1/2	Min 18 Max 26	16d	8 12	10d	5030 7540	2080 3055	
Double TJI® 210 Joist Width = 4-1/18"																	
9-1/2	See current MiTek Product Catalog or Trus Joist software for specialty hanger options								SKH2020L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
11-7/8									SKH2020L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
14									SKH2024L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
16									SKH2024L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
Double TJI® 230 Joist Width = 4-5/8"																	
9-1/2	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2320L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
11-7/8	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2320L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
14	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2324L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
16	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2324L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
Double TJI® 360 Joist Width = 4-5/8"																	
9-1/2	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2320L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
11-7/8	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2320L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
14	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2324L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
16	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2324L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
18	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	SKH2324L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
20	MSH2322-2	1-3/4	6	10d	4	10d	3475	--	--	--	--	--	--	--	--	--	
Double TJI® s31 & TJI® s33 Joist Width = 5"																	
9-1/2	See current MiTek Product Catalog or Trus Joist software for specialty hanger options								SKH2520L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
11-7/8									SKH2520L/R-2 ⁶	3-1/2	--	14	10d	10	10d	5320	3490
14									SKH2524L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
16									SKH2524L/R-2 ⁶	3-1/2	--	16	10d	10	10d	4950	3485
Double TJI® s47 & TJI® 560 Joist Width = 7"																	
9-1/2	MSH422-2 ⁷	2	8	16d	6	16d	6665	--	HD7100_SK45L/R_BV ^{6,8}	2-1/2	Min 14 Max 18	16d	6 8	16d	5030	1845 2810	
11-7/8	MSH422-2 ⁷	2	8	16d	6	16d	6665	--	HD7120_SK45L/R_BV ^{6,8}	2-1/2	Min 16 Max 22	16d	6 8	16d	5030	1845 2950	
14	MSH422-2 ⁷	2	8	16d	6	16d	6665	--	HD7140_SK45L/R_BV ^{6,8}	2-1/2	Min 20	16d	8	16d	5030	2810	
	MSH422-2 ⁷	2	8	16d	6	16d	6665	--			Max 26					12	3055
16	MSH422-2 ⁷	2	8	16d	6	16d	6665	--	HD7160_SK45L/R_BV ^{6,8}	2-1/2	--	24	16d	8	10d	5585	2950
18	MSH422-2 ⁷	2	8	16d	6	16d	6665	--	HD7180_SK45L/R_BV ^{6,8}	2-1/2	--	28	16d	8	10d	7670	2950
20	MSH422-2 ⁷	2	8	16d	6	16d	6665	--	HD7180_SK45L/R_BV ^{6,8}	2-1/2	--	28	16d	8	10d	7670	2950



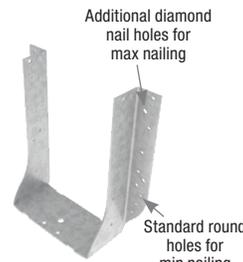
MSH



SKH_L
left shown



SKH_R
right shown



HD

- 1) Shaded hangers require web stiffeners at joist ends.
- 2) Factored resistances listed are based on hanger attachment to a DF-L species solid sawn, TJI® Joist or Microllam® LVL, Parallam® PSL, or TimberStrand® LSL header. Contact your local Weyerhaeuser or MiTek for additional duration of load values.
- 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" diameter x 3" long, and 16d nails are 0.162" diameter x 3-1/2" long.
16d sinkers are 0.148" diameter 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) Hangers utilizing 16d nails are not compatible with TJI® joists.
- 8) Hangers are special order. Consult MiTek for pricing and lead times.
- 9) 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.

Hanger Factored Resistance (Lbs)

Joist Height	MiTek Stock No.	Length of Hanger Seat (in)	Top Mount Hangers ³						Face Mount Hangers								
			Fastener Schedule ⁴				Down ¹ 100%	Uplift ² 115%	MiTek Stock No.	Length of Hanger Seat (in)	Fastener Schedule ⁴				Down ¹ 100%	Uplift ² 115%	
			Header		Joist						Header		Joist				
			Qty	Type	Qty	Type					Qty	Type	Qty	Type			
1-3/4" Microllam® LVL or Timberstrand® LSL																	
7-1/4	PHXU17725	3-1/4	8	16d	6	10d x 1-1/2	6370	1890	HD1770	2-1/2	Min 12 Max 16	16d	4 8	10d x 1-1/2	3010 5030	1430 2185	
9-1/4	BPH17925	2-3/8	10	16d	4	10d x 1-1/2	4890	1140	HD17925	2-1/2	Min 18 Max 24	16d	6 10	10d x 1-1/2	5030 5585	2185 3495	
	PHXU17925	3-1/4	8	16d	6	10d x 1-1/2	6370	1890	HUS179 ⁵	3	--	30	16d	10	16d	9625 8045	
9-1/2	BPH1795	2-3/8	10	16d	4	10d x 1-1/2	4890	1140	HD17925	2-1/2	Min 18 Max 24	16d	6 10	10d x 1-1/2	5030 5585	2185 3495	
	PHXU1795	3-1/4	8	16d	6	10d x 1-1/2	6370	1890	HUS179 ⁵	3	--	30	16d	10	16d	9625 8045	
11-1/4	BPH17112	2-3/8	10	16d	4	10d x 1-1/2	4890	1140	HD17112	2-1/2	Min 22 Max 30	16d	6 12	10d x 1-1/2	5585 7715	2185 3495	
	PHXU17112	3-1/4	8	16d	6	10d x 1-1/2	6370	1890	HUS179 ⁵	3	--	30	16d	10	16d	9625 8045	
11-7/8	BPH17118	2-3/8	10	16d	4	10d x 1-1/2	4890	1140	HD17112	2-1/2	Min 22 Max 30	16d	6 12	10d x 1-1/2	5585 7715	2185 3495	
	PHXU17118	3-1/4	8	16d	6	10d x 1-1/2	6370	1890	HUS179 ⁵	3	--	30	16d	10	16d	9625 8045	
14	BPH1714	2-3/8	10	16d	4	10d x 1-1/2	4890	1140	HD1714	2-1/2	Min 28 Max 36	16d	8 14	10d x 1-1/2	5585 7715	2775 3495	
	PHXU1714	3-1/4	8	16d	6	10d x 1-1/2	6370	1890	HUS179 ⁵	3	--	30	16d	10	16d	9625 8045	
2-11/16" Parallam® PSL																	
9-1/4	PHXU27925	3-1/4	8	16d	6	10d x 1-1/2	8330	1770	HD27925	2-1/2	Min 14 Max 20	16d	6 10	10d x 1-1/2	5030 5030	2185 2775	
	HLBH27925	6	15	NA16D-RS	6	10d x 1-1/2	13825	2530	THDH27925 ⁵	4	--	46	16d	12	16d	12430 7575	
9-1/2	PHXU2795	3-1/4	8	16d	6	10d x 1-1/2	8330	1770	HD27925	2-1/2	Min 14 Max 20	16d	6 10	10d x 1-1/2	5030 5030	2185 2775	
	HLBH2795	6	15	NA16D-RS	6	10d x 1-1/2	13825	2530	THDH27925 ⁵	4	--	46	16d	12	16d	12430 7575	
11-1/4	PHXU27112	3-1/4	8	16d	6	10d x 1-1/2	8330	1770	HD27112	2-1/2	Min 16 Max 24	16d	8 12	10d x 1-1/2	5030 5585	2185 3495	
	HLBH27112	6	15	NA16D-RS	6	10d x 1-1/2	13825	2530	THDH27112 ⁵	4	--	56	16d	14	16d	14330 7575	
11-7/8	PHXU27118	3-1/4	8	16d	6	10d x 1-1/2	8330	1770	HD27112	2-1/2	Min 16 Max 24	16d	8 12	10d x 1-1/2	5030 5585	2185 3495	
	HLBH27118	6	15	NA16D-RS	6	10d x 1-1/2	13825	2530	THDH27112 ⁵	4	--	56	16d	14	16d	14330 7575	
14	PHXU2714	3-1/4	8	16d	6	10d x 1-1/2	8330	1770	HD2714	2-1/2	Min 18 Max 26	16d	8 12	10d x 1-1/2	5030 5585	2775 3495	
	HLBH2714	6	15	NA16D-RS	6	10d x 1-1/2	13825	2530	THDH2714 ⁵	4	--	66	16d	16	16d	17720 10030	
16	PHXU2716	3-1/4	8	16d	6	10d x 1-1/2	8330	1770	HD2714	2-1/2	Min 18 Max 26	16d	8 12	10d x 1-1/2	5030 5585	2775 3495	
	HLBH2716	6	15	NA16D-RS	6	10d x 1-1/2	13825	2530	THDH2714 ⁵	4	--	66	16d	16	16d	17720 10030	
2 Ply 1-3/4" or 3-1/2" Microllam® LVL or Parallam® PSL or Timberstrand® LSL																	
5-1/2	--	--	--	--	--	--	--	--	THD46	3	--	18	16d	12	10d	6525	5270
7-1/4	PHXU35725	3-1/4	8	16d	6	10d	8330	2355	THD48	3	--	28	16d	16	10d	7545	4480
9-1/4	HBP35925	3-1/2	22	16d	10	16d	11005	5530	THD410	3	--	38	16d	20	10d	10625	7715
	HLBH35925	6	15	NA16D-RS	6	16d	13825	2530	THDH410 ⁵	4	--	46	16d	12	16d	12430	7575
9-1/2	HBP3595	3-1/2	22	16d	10	16d	11005	5530	THD410	3	--	38	16d	20	10d	10625	7715
	HLBH3595	6	15	NA16D-RS	6	16d	13825	2530	THDH410 ⁵	4	--	46	16d	12	16d	12430	7575
11-1/4	HBP35112	3-1/2	22	16d	10	16d	11005	5530	THD410	3	--	38	16d	20	10d	10625	7715
	HLBH35112	6	15	NA16D-RS	6	16d	13825	2530	THDH412 ⁵	4	--	56	16d	14	16d	14330	10030
11-7/8	HBP35118	3-1/2	22	16d	10	16d	11005	5530	THD410	3	--	38	16d	20	10d	10625	7715
	HLBH35118	6	15	NA16D-RS	6	16d	13825	2530	THDH412 ⁵	4	--	56	16d	14	16d	14330	10030
14	HBP3514	3-1/2	22	16d	10	16d	11005	5530	THD410	3	--	38	16d	20	10d	10625	7715
	HLBH3514	6	15	NA16D-RS	6	16d	13825	2530	THDH414 ⁵	4	--	66	16d	16	16d	17720	10185
16	HBP3516	3-1/2	22	16d	10	16d	11005	5530	THD412	3	--	48	16d	20	10d	10625	7715
	HLBH3516	6	15	NA16D-RS	6	16d	13825	2530	THDH414 ⁵	4	--	66	16d	16	16d	17720	10185
18	HBP3518	3-1/2	22	16d	10	16d	11005	5530	THD412	3	--	48	16d	20	10d	10625	7715
	HLBH3518	6	15	NA16D-RS	6	16d	13825	2530	THDH414 ⁵	4	--	66	16d	16	16d	17720	10185
18-3/4	--	--	--	--	--	--	--	--	THD414 ⁵	3	--	58	16d	20	10d	10625	7715
	--	--	--	--	--	--	--	--	THDH414 ^{5,6}	4	--	66	16d	16	16d	17720	10185
19	--	--	--	--	--	--	--	--	HD418	2-1/2	--	28	16d	8	10d	7540	3930
	--	--	--	--	--	--	--	--	THDH414 ^{5,6}	4	--	66	16d	16	16d	17720	10185

- Factored resistances listed are based on hanger attachment to a DF-L species solid sawn or Microllam® LVL, Parallam® PSL, or Timberstrand® LSL 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" diameter x 1-1/2" long, 10d nails are 0.148" diameter x 3" long, and 16d nails are 0.162" diameter x 3-1/2" long, NA16D-RS are 16d (0.148" diameter) x 3-1/2" long ring shank nails. 16d sinkers are 0.148" diameter 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.
- Supplemental lateral support connection recommended when hanger height is less than 60% of joist height.



BPH



PHXU



HLBH



THDH



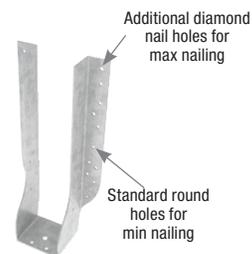
THD



HD



HUS



Hanger Factored Resistance (Lbs)

Joist Height	Top Mount Hangers ³								Face Mount Hangers								
	MiTek Stock No. ⁶	Length of Hanger Seat (in)	Fastener Schedule ⁴				Down ¹ 100%	Uplift ² 115%	MiTek Stock No. ⁶	Length of Hanger Seat (in)	Min/Max	Fastener Schedule ⁴				Down ¹ 100%	Uplift ² 115%
			Header		Joist							Header		Joist			
			Qty	Type	Qty	Type						Qty	Type	Qty	Type		
3 Ply 1-3/4" or 5-1/4" Microllam[®] LVL or Parallam[®] PSL or Timberstrand[®] LSL																	
7-1/4	BPH55725	2-1/4	10	16d	6	10d	5055	2935	--	--	--	--	--	--	--	--	
9-1/4	HBPH55925	3-1/2	22	16d	10	16d	10405	5620	THD610	3	--	38	16d	20	10d	11705	7715
	HLBH55925	6	15	NA16D-RS	6	16d	13825	2860	THDH610 ⁵	4	--	46	16d	16	16d	12430	10030
9-1/2	HBPH5595	3-1/2	22	16d	10	16d	10405	5620	THD610	3	--	38	16d	20	10d	11705	7715
	HLBH5595	6	15	NA16D-RS	6	16d	13825	2860	THDH610 ⁵	4	--	46	16d	16	16d	12430	10030
11-1/4	HBPH55112	3-1/2	22	16d	10	16d	10405	5620	THD610	3	--	38	16d	20	10d	11705	7715
	HLBH55112	6	15	NA16D-RS	6	16d	13825	2860	THDH612 ⁵	4	--	56	16d	20	16d	13975	10030
11-7/8	HBPH55118	3-1/2	22	16d	10	16d	10405	5620	THD610	3	--	38	16d	20	10d	11705	7715
	HLBH55118	6	15	NA16D-RS	6	16d	13825	2860	THDH612 ⁵	4	--	56	16d	20	16d	13975	10030
14	HBPH5514	3-1/2	22	16d	10	16d	10405	5620	THD610	3	--	38	16d	20	10d	11705	7715
	HLBH5514	6	15	NA16D-RS	6	16d	13825	2860	THDH614 ⁵	4	--	66	16d	22	16d	17720	10185
16	HBPH5516	3-1/2	22	16d	10	16d	10405	5620	THD612	3	--	48	16d	20	10d	11705	7715
	HLBH5516	6	15	NA16D-RS	6	16d	13825	2860	THDH614 ⁵	4	--	66	16d	22	16d	17720	10185
18	HBPH5518	3-1/2	22	16d	10	16d	10405	5620	THD612	3	--	48	16d	20	10d	11705	7715
	HLBH5518	6	15	NA16D-RS	6	16d	13825	2860	THDH614 ⁵	4	--	66	16d	22	16d	17720	10185
18-3/4	--	--	--	--	--	--	--	--	THD614 ⁸	3	--	58	16d	20	10d	11705	7715
	--	--	--	--	--	--	--	--	THDH614 ⁵	4	--	66	16d	22	16d	17720	10185
19	--	--	--	--	--	--	--	--	THD614 ⁸	3	--	58	16d	20	10d	11705	7715
--	--	--	--	--	--	--	--	--	THDH614 ⁵	4	--	66	16d	22	16d	17720	10185
4 Ply 1-3/4" or 7" Microllam[®] LVL or Parallam[®] PSL or Timberstrand[®] LSL																	
9-1/4	HBPH71925	3-1/2	22	16d	10	16d	10405	5620	THD7210	3	--	38	16d	20	10d	11705	7715
	HLBH71925	6	15	NA16D-RS	6	16d	13825	2860	THDH7210 ⁵	4	--	46	16d	12	16d	12430	7575
9-1/2	HBPH7195	3-1/2	22	16d	10	16d	10405	5620	THD7210	3	--	38	16d	20	10d	11705	7715
	HLBH7195	6	15	NA16D-RS	6	16d	13825	2860	THDH7210 ⁵	4	--	46	16d	12	16d	12430	7575
11-1/4	HBPH71112	3-1/2	22	16d	10	16d	10405	5620	THD7210	3	--	38	16d	20	10d	11705	7715
	HLBH71112	6	15	NA16D-RS	6	16d	13825	2860	THDH7212 ⁵	4	--	56	16d	14	16d	12430	10030
11-7/8	HBPH71118	3-1/2	22	16d	10	16d	10405	5620	THD7210	3	--	38	16d	20	10d	11705	7715
	HLBH71118	6	15	NA16D-RS	6	16d	13825	2860	THDH7212 ⁵	4	--	56	16d	14	16d	12430	10030
14	HBPH7114	3-1/2	22	16d	10	16d	10405	5620	THD7210	3	--	38	16d	20	10d	11705	7715
	HLBH7114	6	15	NA16D-RS	6	16d	13825	2860	THDH7214 ⁵	4	--	66	16d	16	16d	17720	10185
16	HBPH7116	3-1/2	22	16d	10	16d	10405	5620	HD7120	2-1/2	Min	16	16d	6	16d	5030	2460
	HLBH7116	6	15	NA16D-RS	6	16d	13825	2860	THDH7214 ⁵	4	Max	22	16	8	16d	5585	3930
18	HBPH7118	3-1/2	22	16d	10	16d	10405	5620	HD7140	2-1/2	Min	20	16d	8	16d	5030	3745
	HLBH7118	6	15	NA16D-RS	6	16d	13825	2860	THDH7214 ⁵	4	Max	26	16d	12	16d	7670	4070
18-3/4	--	--	--	--	--	--	--	--	HD7140	2-1/2	Min	20	16d	8	16d	5030	3745
	--	--	--	--	--	--	--	--	THDH7214 ⁵	4	Max	26	16d	12	16d	7670	4070
19	--	--	--	--	--	--	--	--	HD7180	2-1/2	Min	28	16d	8	10d	7670	3930
	--	--	--	--	--	--	--	--	THDH7214 ⁵	4	Max	66	16d	16	16d	17720	10185



BPH



HBPH



HLBH



THD



HD



THDH

- Factored resistances listed are based on hanger attachment to a DF-L species solid sawn or Microllam[®] LVL, Parallam[®] PSL, or Timberstrand[®] LSL 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 nails are 0.148" diameter x 3" long, and 16d nails are 0.162" diameter x 3-1/2" long, NA16D-RS are 16d (0.148" diameter) x 3-1/2" long ring shank nails. 16d sinkers are 0.148" diameter 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 models.
- For additional sizes, stock numbers, and modifications not shown, refer to MiTek's Product Catalog.
- Hangers are special order. Consult MiTek for pricing and lead times.
- Supplemental lateral support connection recommended when hanger height is less than 60% of joist height.

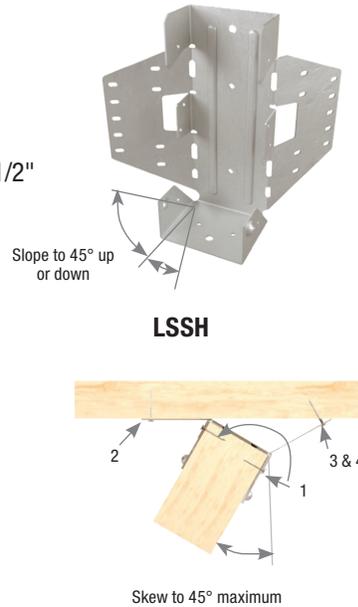
The LSSH series connects rafters to ridge beams in vaulted roof structures. This series is field adjustable to meet a variety of skew and/or slope applications. Slopes and skews 0° to 45°.

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" 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

Hanger Factored Resistance (Lbs)

Joist Height	MiTek Stock No. ^{1,4}	Length of Hanger Seat (in)	Installation Type	Fastener Schedule ⁶				D Fir-L	
				Header		Joist		Down ² 100%	Uplift ³ 115%
				Qty	Type	Qty	Type		
TJI[®] 110 Joist Width = 1-3/4"									
9-1/2 – 16	LSSH179-TZ	3	Sloped Only	10	10d HDG	7	10d x 1-1/2 HDG	2460	1565
			Skewed Only <u>or</u> Sloped & Skewed	10	10d HDG	7	10d x 1-1/2 HDG	2460	1565
TJI[®] 210 Joist Width = 2-1/8"									
9-1/2 – 16	LSSH20-TZ	3	Sloped Only	10	10d HDG	7	10d x 1-1/2 HDG	2065	1415
			Skewed Only <u>or</u> Sloped & Skewed	10	10d HDG	7	10d x 1-1/2 HDG	2065	1415
TJI[®] 230 or TJI[®] 360 Joist Width = 2-5/16"									
9-1/2 – 16	LSSH23-TZ	3	Sloped Only	10	10d HDG	7	10d x 1-1/2 HDG	2065	1415
			Skewed Only <u>or</u> Sloped & Skewed	10	10d HDG	7	10d x 1-1/2 HDG	2065	1415
TJI[®] s31 or TJI[®] s33 Joist Width = 2-1/2"									
9-1/2 – 16	LSSH25-TZ	3	Sloped Only	18	16d HDG	12	10d x 1-1/2 HDG	3735	1705
			Skewed Only <u>or</u> Sloped & Skewed	14	16d HDG	12	10d x 1-1/2 HDG	2245	1705
TJI[®] s47 or TJI[®] 560 Joist Width = 3-1/2"									
11-7/8 – 20	LSSH35-TZ	3	Sloped Only	18	16d HDG	12	10d x 1-1/2 HDG	4505	2315
			Skewed Only <u>or</u> Sloped & Skewed	14	16d HDG	12	10d x 1-1/2 HDG	2670	2315

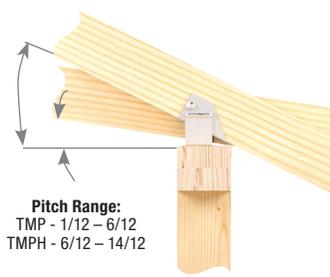
1) Shaded hangers require web stiffeners at joist ends.
 2) Factored resistances listed are based on hanger attachment to a D Fir-L species solid sawn, Microllam[®] LVL, Parallam[®] PSL, or TimberStrand[®] LSL header. Contact your local Weyerhaeuser or MiTek for additional duration of load values.
 3) 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) Hangers utilizing 16d nails are not compatible with TJI[®] joists.
 6) **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, 16d 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

TMP Hanger Factored Resistance (Lbs)

Joist Height	MiTek Stock No. ¹	Fastener Schedule ⁴				D Fir-L	
		Header		Joist		Down ² 100%	Uplift ³ 115%
		Qty	Type	Qty	Type		
TJI[®] 110		Joist Width = 1-3/4"					
All	TMP175	6	10d	4	10d x 1-1/2	1620	400
TJI[®] 210		Joist Width = 2-1/8"					
All	TMP21	6	10d	4	10d x 1-1/2	1815	400
TJI[®] 230 or TJI[®] 360		Joist Width = 2-5/16"					
All	TMP23	6	10d	4	10d x 1-1/2	2770	400
TJI[®] s31 or TJI[®] s33		Joist Width = 2-1/2"					
All	TMP25	6	10d	4	10d x 1-1/2	2770	400
TJI[®] s47 or TJI[®] 560		Joist Width = 3-1/2"					
All	TMP4	6	10d	4	10d x 1-1/2	2770	400



Typical TMP installation



Typical TMPH installation

- 1) Web stiffeners may be required for hangers by Weyerhaeuser.
- 2) Factored resistances listed are based on hanger attachment to a D Fir-L species solid sawn, Microllam[®] LVL, Parallam[®] PSL, or TimberStrand[®] LSL header. Contact your local Weyerhaeuser or MiTek for additional duration of load values.
- 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

TMPH Hanger Factored Resistance (Lbs)

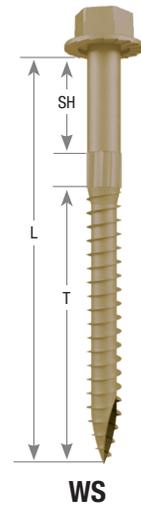
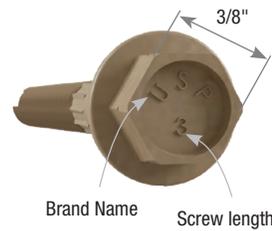
Joist Height	MiTek Stock No. ¹	Fastener Schedule ⁴				D Fir-L										
		Header		Joist		According to Pitch ²										Uplift ³ 115%
		Qty	Type	Qty	Type	6/12	7/12	8/12	9/12	10/12	11/12	12/12	13/12	14/12		
TJI[®] 110		Joist Width = 1-3/4"														
All	TMPH175	10	10d	8	10d x 1-1/2	5220	5385	5540	5005	4470	4305	4120	3655	3185	375	
TJI[®] 210		Joist Width = 2-1/8"														
All	TMPH21	10	10d	8	10d x 1-1/2	5220	5385	5540	5005	4470	4305	4120	3655	3185	375	
TJI[®] 230 or TJI[®] 360		Joist Width = 2-5/16"														
All	TMPH23	10	10d	8	10d x 1-1/2	5220	5385	5540	5005	4470	4305	4120	3655	3185	375	
TJI[®] s31 or TJI[®] s33		Joist Width = 2-1/2"														
All	TMPH25	10	10d	8	10d x 1-1/2	5220	5385	5540	5005	4470	4305	4120	3655	3185	375	
TJI[®] s47 or TJI[®] 560		Joist Width = 3-1/2"														
All	TMPH4	10	10d	8	10d x 1-1/2	5220	5385	5540	5005	4470	4305	4120	3655	2605	375	

- 1) Web stiffeners are required for all Wood I-Joist installations.
- 2) Factored resistances listed are based on hanger attachment to a D Fir-L species solid sawn, Microllam[®] LVL, Parallam[®] PSL, or TimberStrand[®] LSL header. Contact your local Weyerhaeuser or MiTek for additional duration of load values.
- 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.

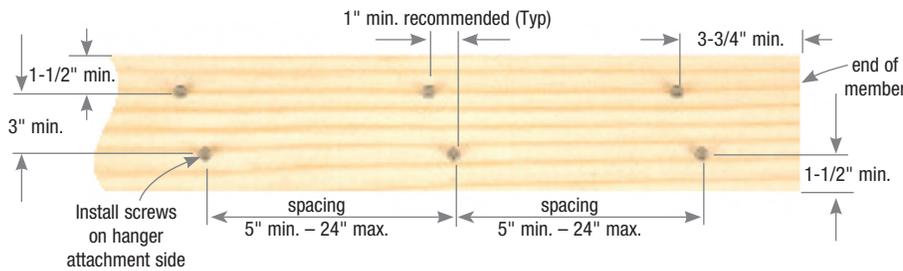
WS Interior Structural Wood Screw Application - Joining 2, 3, or 4 Ply Microllam® LVL Members

Installation:

- Screws are self-drilling.
- Install using a low speed clutch drill with 3/8" hex head driver. The washer head should be flat to the surface and the serrations will oppose turning and release the clutch. Do not over-tighten the screws.
- For 2 ply members, wood screws shall be installed with the screw heads in the loaded ply.
- For 3 or 4 ply members, wood screws shall be installed in both outer plies.
- Designer shall specify all wood screw locations.
- Increase edge and end distances if wood splitting occurs.
- Stagger all screws installed into the opposite face.
- A minimum of 2 rows of screws shall be used for all members 5-1/2" and deeper.



Recommended Row Guidelines

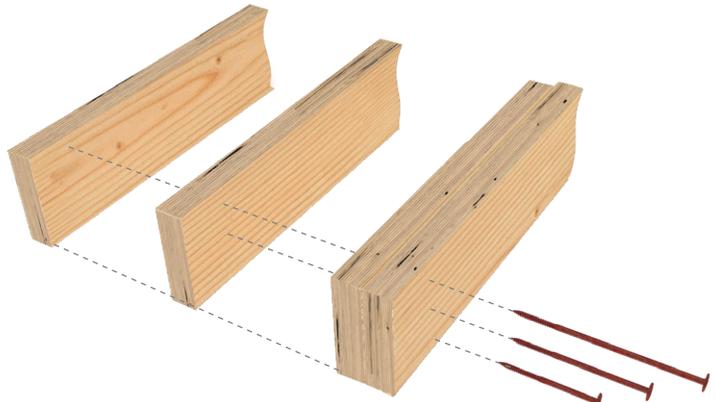


Size (in)	MiTek Stock No.	Dimensions (in)			Multiple Members Installation Figure ^{3,7,9,10}	Maximum Factored Uniform Loads that can be applied to either outside member ^{1,2,3,4,5,6}											
		L	SH	T		Wood Screw Spacing											
						12" O.C.						24" O.C.					
						2 Rows		3 Rows		2 Rows		3 Rows		2 Rows		3 Rows	
Lbs/ft	kN/m	Lbs/ft	kN/m	Lbs/ft	kN/m	Lbs/ft	kN/m	Lbs/ft	kN/m	Lbs/ft	kN/m	Lbs/ft	kN/m				
1/4 x 3-1/2	WS35	3-1/2	3/4	2-1/2	1	1845	26.93	2765	40.35	1230	17.95	1845	26.93	920	13.43	1385	20.21
					2	1385	20.21	2075	30.28	920	13.43	1385	20.21	690	10.07	1035	15.11
					4	1385	20.21	2075	30.28	920	13.43	1385	20.21	690	10.07	1035	15.11
					5	1230	17.95	1845	26.93	820	11.97	1230	17.95	615	8.98	920	13.43
1/4 x 6	WS6 ⁸	6	1-3/4	4	3	1560	22.77	2340	34.15	1040	15.18	1560	22.77	780	11.38	1170	17.08
					6	5470	79.83	8210	119.82	3650	53.27	5470	79.83	2735	39.92	4105	59.91

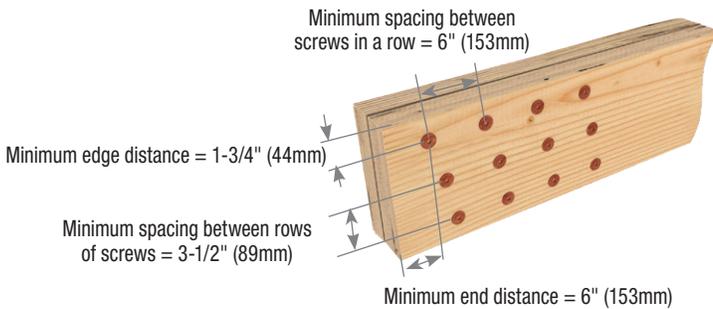
- 1) Factored Resistance values determined in accordance with CSA 086:19 Clause 12.11.
- 2) Loads are based on SCL with an equivalent S.G. = 0.50 and a side member thickness of 1-3/4", except for Figure 6 installation with a side member thickness of 3-1/2".
- 3) Load values depicted assume that the uniform load is applied to the most narrow outside ply only.
- 4) Except for Figure 6 installation, load values neglect any contribution of screws installed to opposite side, even if they extend significantly into the loaded ply.
- 5) Loads are for normal (100%) duration of load, and may be increased in accordance with the code.
- 6) Uniform loads in table represent the capacity of the fasteners. The capacity of the LVL or PSL beam may be less and should be checked by a qualified designer or with the manufacturer's literature.
- 7) A qualified designer shall ensure the adequacy of a 7" wide beam to resist the applied load on one edge; otherwise, the loads shall be uniformly distributed across the width or applied equally on both sides.
- 8) MiTek's WS Structural Wood Screws longer than 3-1/2" are not recommended for use with Parallam® PSL or TimberStrand® LSL.
- 9) For Figure 1 and 4: The head of the wood screw is on the same side as the loaded ply.
- 10) For Figures 2, 3, 5, and 6: Stagger the screws on opposite face by half minimum spacing requirements.

MIFLK Exterior Structural Wood Screw Application – Joining 2, 3, or 4 Ply Microllam® LVL members

The MIFLK FlatLOK structural wood screw has been designed for use in joining multiple-ply structural wood beams. Using an impact driver, standard corded or cordless 1/2" low speed /high torque drill, install screws into the side of the outermost ply. As the thread fully engages the final ply, allow the underside of the washer head to pull the plies firmly together.

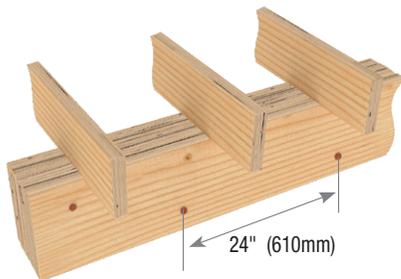


Minimum Spacing Requirements:

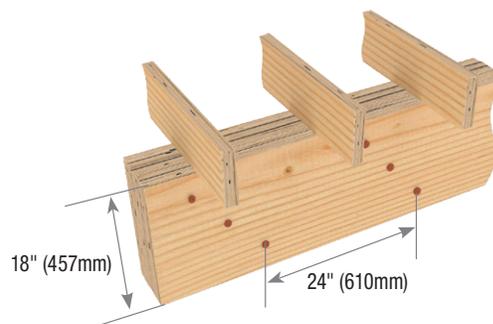


Top Loaded Beams

Where floor joists rest on all plies of the beam measuring less than 18" (457mm), MIFLK screws should be installed in two staggered rows at 24" (610mm) O.C. spacing.



For beam depths of 18" or more, this pattern should be increased to three staggered rows of MIFLK screws every 24" on center.

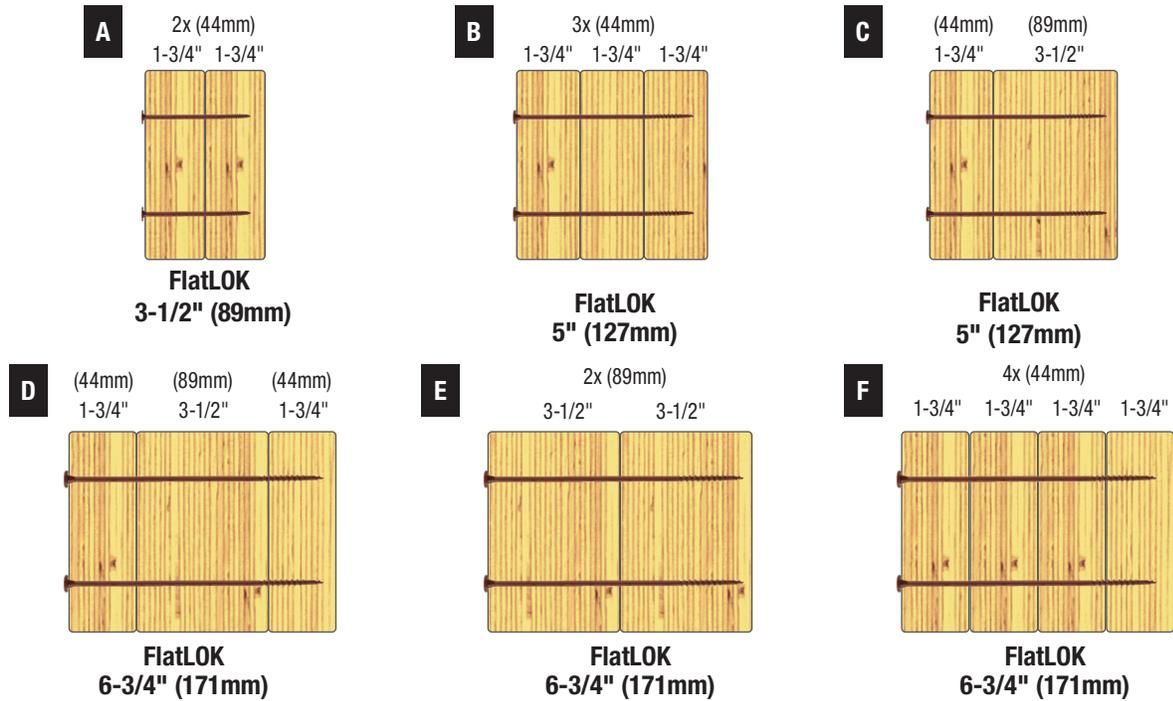


General Guidelines:

- Beams wider than 7" require special consideration by the design professional. The values on the next page 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.
- To avoid damaging the beam, fastener heads must not be countersunk.
- The MIFLK312, MIFLK005, and MIFLK634 are not designed for use with dimensional lumber.
- A qualified designer or engineer should always be consulted for critical assemblies and fastening requirements.

MIFLK Exterior Structural Wood Screw Application – Joining 2, 3, or 4 Ply Microllam® LVL members

Fastener Size Selection by Assembly Type (2 rows shown)



Side Loaded Beams

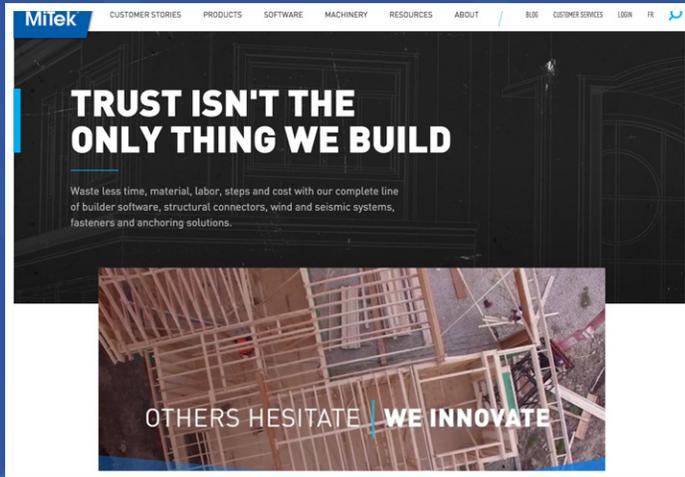
Where floor joists are joined to the side of the beam (typically using a joist hanger), this load chart must be used to establish the proper pattern based on the design load as determined by the engineer and noted on the plans.

Length	Product Code	Head Marking	No. of Screws Vertical Column	Spacing between screws in a row		Factored Uniform Load Capacities by Assembly Type (lb/ft) ^{1,2,3,4,5}						
				in	mm	EWP Wood Specific Gravity $G \geq 0.50$						
						A	B	C	D	E	F	
3-1/2" (89mm)	MIFLK312	F3.5FL	2	24	610	770	--	--	--	--	--	
				19.2	488	960						
				16	406	1160						
			3	24	610	1160	--	--	--	--	--	
				19.2	488	1440						
				16	406	1730						
5" (127mm)	MIFLK005	F5.0FL	2	24	610	--	600	780	--	--	--	
				19.2	488	--	750	980				
				16	406	--	900	1170				
			3	24	610	--	900	1170	--	--	--	
				19.2	488	--	1130	1460				
				16	406	--	1350	1760				
6-3/4" (171mm)	MIFLK634	F6.75FL	2	24	610	--	--	--	--	530	1220	530
				19.2	488	--				670	1530	670
				16	406	--				800	1830	800
			3	24	610	--	--	--	--	800	1830	800
				19.2	488	--				1000	2290	1000
				16	406	--				1200	2750	1200

- 1) The factored uniform loads are derived from tested fastener properties as reported in Technical Evaluation Report TER 1501-08. This report can be referenced at FastenMaster.com.
- 2) A specific gravity of 0.5 was used for all engineered wood (EW) calculations.
- 3) The uniform loads 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.
- 4) Values listed reflect 100% stress level ($K_p=1.0$). The designer may apply adjustment factors to increase or decrease the loads per CSA O86:19.
- 5) The values assume that the fasteners are loaded on either the point side or head side.

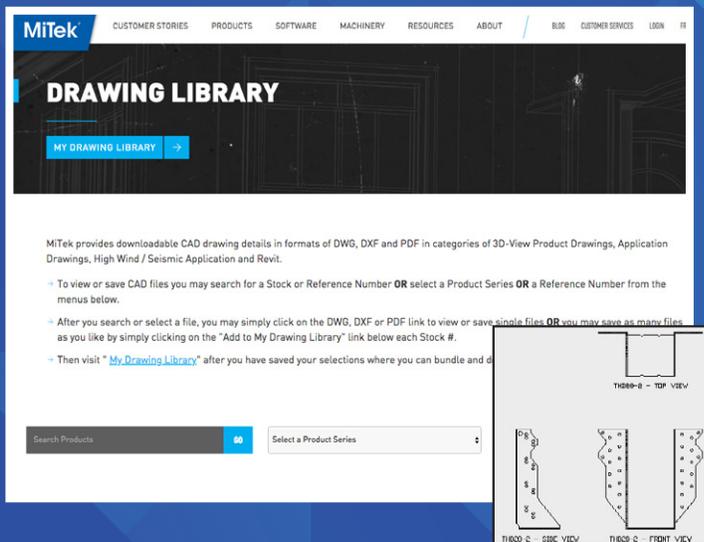
SPECIFICATION TOOLS

Available at MiTek.ca



Comprehensive Web Site

- Contains all MiTek literature in a printable .pdf format
- Drawing Library downloads



Drawing Library

- Drawing Library contains over 350 illustrations in .DXF and .DWG formats
- Find drawings quickly by MiTek Stock No. or Reference No.
- High Wind/Seismic Applications are also available

MiTek[®]

Customer Service
Phone: 1-800-268-3434
Fax: 1-905-952-2903
Email: CA-MBP-Orders@MiTek.ca

Manufacturing:
Montgomery, MN • Phoenix, AZ
Largo, FL • Thornhill, ON

1-800-268-3434
MiTek.ca

Warehouses:
Surrey, BC • Calgary, AB
Edmonton, AB • Laval, QC • Dieppe, NB