

The MSH is field adjustable. The flanges can be used in top mount, face mount, or combination installations. An open back design allows installation after a member is placed in position.

Materials: See chart

Finish: G90 galvanizing

Options: See chart for Corrosion Finish Options on pages 274-275 and Nailer Options Chart below

Codes: IBC, FL, LA

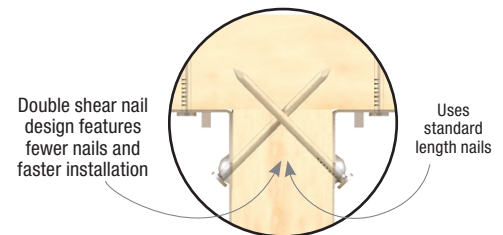
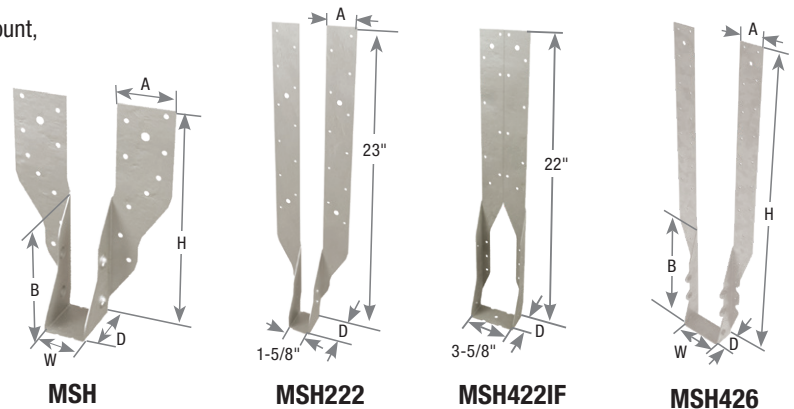
Installation:

- Use all specified fasteners. See Product Notes, page 18.
- Web stiffeners are required for I-Joist installations.

Nailer Options

– chart represents maximum allowable loads for hangers used on wood nailers.
Reference page 203.

MiTek Series	Nailer Size	Fastener Schedule ²					DF/SP Allowable Loads (Lbs.) ^{1,3}	
		Nailer			Joist		Download 100%	Download 100%
		Top Qty	Face Qty	Type	Qty	Type		
MSH (18 gauge)	2X	4	--	10d x 1-1/2"	4	10d x 1-1/2"	1245	1045
	3X	4	--	10d x 1-1/2"	4	10d x 1-1/2"	1245	1045
	(2) 2X	4	2	10d	4	10d x 1-1/2"	1950	1540
	4X	4	2	10d	4	10d x 1-1/2"	1950	1540
MSH (16 or 14 gauge)	2X	4	2	10d x 1-1/2"	6 ⁴	10d x 1-1/2"	2355	1860
	3X	4	2	10d x 1-1/2"	6 ⁴	10d x 1-1/2"	2355	1860
	(2) 2X	4	2	16d x 2-1/2"	6	10d x 1-1/2"	2080	1745
	4X	4	2	16d x 2-1/2"	6	10d x 1-1/2"	2080	1745



- 1) Listed loads shall not be increased.
- 2) **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 x 2-1/2" nails are 0.162" dia. x 2-1/2" long.
- 3) **Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.**
- 4) Refer to load table on page 274 or 275 for gauge and joist nail quantity of desired MSH hanger.

New products or updated product information are designated in **blue** font.

Mounting Conditions

Face Max

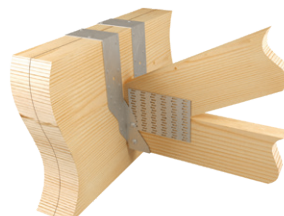
All header nails used should be driven into the wide face of the header.



Typical MSH face-max installation

Top-Max

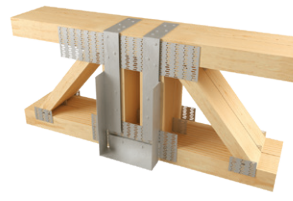
The hanger is installed in a top mount condition with at least six lowest header face nail holes filled, and four top flange nails filled. Refer to **Table 1** below for minimum top flange length requirements.



Typical MSH top-max installation

Top-Min

The hanger is installed in a top mount condition with at least the top two header face nail holes filled, and four top flange nail holes filled. Refer to **Table 1** below for minimum top flange length requirements. The joist nails shall be installed straight into the joist for all models.



Typical MSH top-min installation

Combination Face-Max / Top-Max

Face-Max values apply for the entire connection. Follow fastening directions for the applicable mounting condition for each individual flange strap.



Typical MSH combination installation

Table 1

Minimum Top Flange Length for Top Mount Installations ¹											
7/8"	1-1/8"	1-3/8"	1-1/2"	1-3/4"	1-7/8"	2"	2-3/16"		2-5/8"	2-3/4"	2-13/16"
MSH426	MSH29	MSH2322-2	MSH422-2	MSH426-2	MSH1713	MSH424	MSH222	MSH222-2	MSH218-2	MSH218	MSH213
MSH426IF	--	MSH2622-2	MSH422-2IF	--	--	--	MSH1722	MSH422IF	--	MSH413	--
--	--	--	--	--	--	--	MSH2322	MSH2022	--	MSH418	--
--	--	--	--	--	--	--	MSH322	--	--	MSH422	--

1) Total hanger height will be reduced by the top flange length. Carried member height must be accounted for accordingly.

Continued on next page

Plated Truss

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2) **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

Continued on next page

I-Joist, LVL, LSL & PSL Chart

Joist Material & Width	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Mounting Condition	Fastener Schedule ²					DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
				W	D	H	A	B		Header		Joist			Allowable Loads (Lbs.)				Allowable Loads (Lbs.)					
										Top Qty	Face Qty	Type	Qty	Type	Floor 100%	Roof 115%	125%	Uplift ¹ 160%	Floor 100%	Roof 115%	125%	Uplift ¹ 160%		
2x Lumber or Trusses	MSH222	THAI222	18	1-5/8	1-3/4	23	1-13/16	10-13/16	face-max	--	22	10d	4	10d x 1-1/2	2120	2190	2230	715	1540	1595	1635	575		
									top-max	4	6	10d	4	10d x 1-1/2	2120	2190	2230	715	1540	1595	1635	575		
									top-min	4	2	10d	4	10d x 1-1/2	2120	2190	2230	--	1540	1595	1635	--		
1-3/4" LVL or I-Joist	MSH1713	--	18	1-13/16	1-3/4	14-7/16	1-13/16	10-3/4	face-max	--	12	10d	4	10d	1440	1640	1770	715	1265	1445	1555	575		
									top-max	4	6	10d	4	10d	2395	2460	2505	715	1725	1785	1820	575		
									top-min	4	2	10d	4	10d x 1-1/2	2390	2390	2390	--	1725	1785	1820	--		
	MSH1722	THAI1.81/22	18	1-13/16	1-3/4	22-7/8	1-7/8	10-3/4	face-max	--	22	10d	4	10d x 1-1/2	2280	2280	2280	715	1725	1785	1820	575		
									top-max	4	6	10d	4	10d x 1-1/2	2395	2460	2505	715	1725	1785	1820	575		
									top-min	4	2	10d	4	10d x 1-1/2	2390	2390	2390	--	1725	1785	1820	--		
2" wide I-Joist	MSH2022	THAI2.06/22	18	2-1/16	1-3/4	22-5/8	1-13/16	10-7/16	face-max	--	22	10d	4	10d	2350	2350	2350	715	1875	1875	1875	570		
									top-max	4	6	10d	4	10d	2670	2735	2780	715	1910	1970	2005	570		
									top-min	4	2	10d	4	10d	2390	2390	2390	--	1890	1890	1890	--		
2-5/16" wide I-Joist	MSH2322	THAI3522	18	2-3/8	1-3/4	22-5/8	1-13/16	10-7/16	face-max	--	22	10d	4	10d x 1-1/2	2350	2350	2350	715	1875	1875	1875	570		
									top-max	4	6	10d	4	10d x 1-1/2	3010	3075	3120	715	2140	2200	2240	570		
									top-min	4	2	10d	4	10d x 1-1/2	2395	2395	2395	--	1895	1895	1895	--		
2-1/2" wide Floor Trusses	MSH322	THAI322	18	2-9/16	1-3/4	22-1/2	1-13/16	10-3/8	face-max	--	22	10d	4	10d x 1-1/2	2350	2350	2350	715	1875	1875	1875	570		
									top-max	4	6	10d	4	10d x 1-1/2	3240	3240	3240	715	2330	2385	2425	570		
									top-min	4	2	10d	4	10d x 1-1/2	2395	2395	2395	--	1895	1895	1895	--		
3-1/2" wide Floor Trusses	MSH413	THA413	16	3-9/16	1-3/4	14	1-7/8	7-5/8	face-max	--	14	10d	6	10d	2340	2640	2855	1815	2055	2325	2510	1450	IBC, FL, LA	
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3035	3090	3090	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH418	THA418	16	3-9/16	1-3/4	17-1/2	1-7/8	7-5/8	face-max	--	18	10d	6	10d	2840	3200	3460	1815	2495	2815	3040	1450		
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3035	3090	3090	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH422	THA422, THAI422	16	3-9/16	1-3/4	21-1/2	1-7/8	7-5/8	face-max	--	22	10d	6	10d	3340	3765	4065	1815	2935	3310	3320	1450		
									top-max	4	6	10d	6	10d	3525	3705	3830	1815	2665	2825	2935	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2005	2005	2005	--		
	MSH422IF	THAC418, THAC422	16	3-9/16	1-3/4	22	--	9-13/16	face-max	--	22	10d	4	10d	2750	3085	3330	675	2420	2715	2930	540		
									top-max	4	6	10d	4	10d	3485	3575	3640	675	2520	2600	2660	540		
									top-min	4	2	10d	4	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH424	--	16	3-5/8	2	21-1/2	2-1/16	5-3/16	face-max	--	36	10d	6	10d	5090	5725	5975	1815	4150	4310	4420	1445		
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3085	3085	3085	1445		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
MSH426	THA426	14	3-5/8	1-3/4	26	1-13/16	8	face-max	--	38	16d	6	16d	5455	5675	5825	1815	4035	4230	4360	1455			
								top-max	4	8	16d	6	16d	3760	3760	3760	1795	3010	3010	3010	1435			
								top-min	4	2	16d	6	16d	2435	2435	2435	--	2160	2160	2160	--			
MSH426IF	THAC426	14	3-5/8	1-3/4	26	--	8	face-max	--	--	16d	--	16d	5455	5675	5825	1815	4035	4230	4360	1455			
								top-max	4	8	16d	6	16d	3760	3760	3760	1795	3010	3010	3010	1435			
								top-min	4	2	16d	6	16d	2435	2435	2435	--	2160	2160	2160	--			
4-5/8" wide I-Joist	MSH2322-2	--	16	4-3/4	1-3/4	22	1-7/8	9-1/4	face-max	--	46	10d	4	10d	5560	5620	5665	675	3880	3935	3970	535		
									top-max	4	6	10d	4	10d	3485	3575	3640	675	2520	2600	2660	535		
									top-min	4	2	10d	4	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH2622-2	--	16	5-3/8	1-3/4	22	1-7/8	9-1/4	face-max	--	46	10d	4	10d	5560	5620	5665	675	3880	3935	3970	535		
									top-max	4	6	10d	4	10d	3485	3575	3640	675	2520	2600	2660	535		
top-min	4	2	10d	4	10d	2530	2530	2530	--	2000	2000	2000	--											

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.

2) **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.**Corrosion Finish Key** ■ Stainless Steel ■ Gold Coat ■ HDG ■ Triple Zinc

The MSHL/R is a versatile 45° skewed hanger with multiple installation options. It can be installed on a supporting girder truss as well as solid-sawn and structural composite lumber headers.

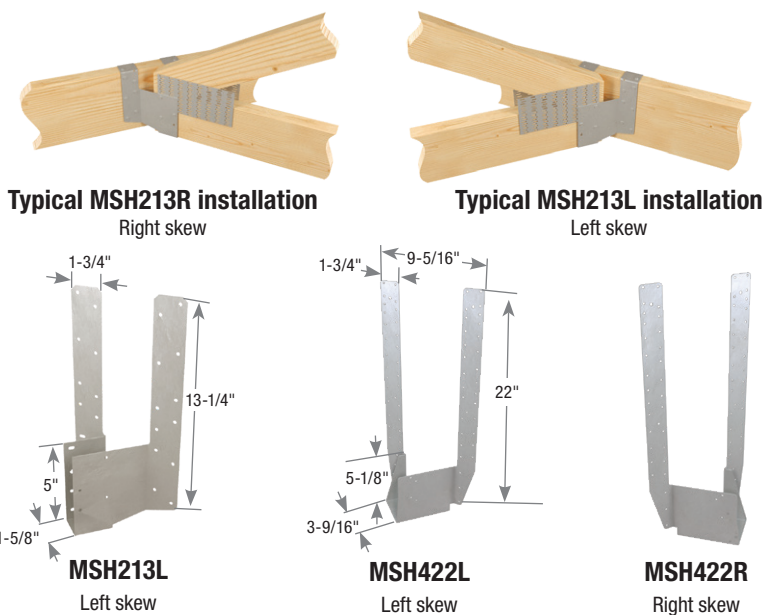
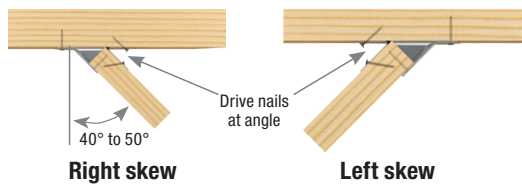
Materials: See chart

Finish: G90 galvanizing

Codes: See chart for code references

Installation:

- Install the required number of fasteners according to the load table.
- Install fasteners into the carrying members at the locations described below based on the proper "Mounting Condition."
- Web stiffeners are required for I-Joist installations.
- Hanger is factory skewed at 45° left or right.



CONNECTION TO CARRYING MEMBER – Mounting Condition

Face-Max	Top-Max	Top-Min	Combination Face-Max/Top-Max
For MSH422L/R, the bottom six (6) fastener holes (three on each side of the bucket) must be filled. Install eight additional fasteners (four (4) in each strap) where applicable. For MSH213L/R, the bottom eight (8) fastener holes must be filled (four (4) in each strap). Install fourteen (14) additional fasteners, seven (7) in each strap. Min. 2x6 bottom chord required.	The straps must be field-bent over the header a minimum of 2" to allow four (4) top flange nail holes to be filled (two in each strap). The bottom six (6) fastener holes (three on each side of the bucket) must be filled. Min. 2x6 bottom chord required.	The straps must be field bent over the header a minimum of 2" to allow four (4) top flange nail holes to be filled (two in each strap). Also install the two (2) uppermost face nails (one on each strap) near the top of the header.	Follow the Face-Max installation for one side of the connector and the Top-Max installation for the opposite side of the connector. The Face-Max allowable loads apply to this type of installation. Min. 2x6 bottom chord required.
Typical MSHL/R face-max installation	Typical MSHL/R top-max installation	Typical MSHL/R top-min installation	Typical MSHL/R combination installation

CONNECTION TO CARRIED MEMBER – All Mounting Conditions

Install six (6) 10d x 1-1/2" nails into 2x carried member, or six (6) 10d nails into 3-1/2" wide carried member.

Joist Material & Width	MiTek Stock No.	Ref. No.	GA	Mounting Condition	Fastener Schedule ²					DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Code Ref.	
					Header			Joist		Download				Uplift ¹	Download				Uplift ¹
					Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%		
2x Lumber or Trusses	MSH213L/R	--	18	face-max	--	22	10d	6	10d x 1-1/2	1770	1770	1770	670	1430	1430	1430	540	IBC, FL, LA	
				top-max	4	6	10d	6	10d x 1-1/2	1810	1810	1810	670	1460	1460	1460	540		
				top-min	4	2	10d	6	10d x 1-1/2	1325	1325	1325	--	1240	1240	1240	--		
				combination	2	14	10d	6	10d x 1-1/2	1770	1770	1770	670	1430	1430	1430	540		
3-1/2" LVL or Floor Trusses	MSH422L/R	THAL/R422	16	face-max	--	14	10d	6	10d	1750	1755	1755	560	1395	1395	1395	445		
				top-max	4	6	10d	6	10d	1820	1820	1820	560	1490	1490	1490	445		
				top-min	4	2	10d	6	10d	1385	1385	1385	--	1100	1100	1100	--		
				combination	2	10	10d	6	10d	1750	1755	1755	560	1395	1395	1395	445		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.

2) **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

New products or updated product information are designated in **blue font**.

- 1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
- 2) **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. New products or updated product information are designated in **blue font**.

MiTék's MSSH217 hanger accommodates a skew range of 60° to 85° (30° maximum off the girder) without the need for a more expensive custom design hanger. Face nail to webs or bend the flange strap over the chord. Available in left (L) or right (R) configurations.

Materials: 18 gauge

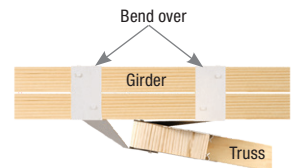
Finish: G90 galvanizing

Installation:

- Use all specified fasteners. See Product Notes, page 18.
- The 3 lower holes on each strap are for top nailing when the strap is bent over the truss chord. These holes are not for face nailing.
- One or both straps may be bent over the bottom chord of the girder with top or backside nailing.
- **Note:** Select the correct (right or left) hanger so that the strap on the outside of the angle will pass the end of the truss. When facing the hanger, the strap in the rear turns in the direction of the skew. The front strap turns to pass behind the end of the carried member.
- Attach the hanger at the end of the truss with a single 10d (0.148" dia.) x 1-1/2" nail into the side flange or bottom.
- Place the truss in position against the girder. Push the outside strap past the end of the truss to the girder web and face nail through the top 8 holes with 10d (0.148" dia.) x 1-1/2" nails for a 1-ply girder, or 10d (0.148" dia. x 3") common nails for multiple-ply girders.
- The strap inside the angle can be formed over diagonal webs (if design allows) or bend over the girder chord. Use two nails into the top and/or back side of the girder.
- If the outside strap does not contact a web, bend the strap tightly over the girder chord. Use two nails into the top and/or back side of the girder.
- For uplift resistance, other means of attachment are required. If both the truss and girder have vertical webs, attach a scab to pack out the girder web nearly flush with the truss web and use a field adjustable MP framing angle across the two. A top chord connection for uplift requires a flat LSTA strap tie wrapped under the girder and over the truss chord.



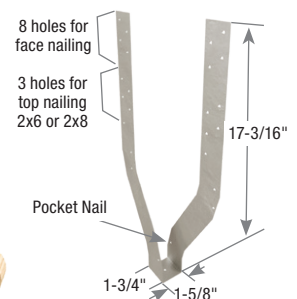
MSSH217L
Left shown attached to web and top of chord



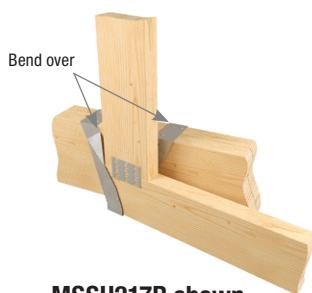
Top view right shown



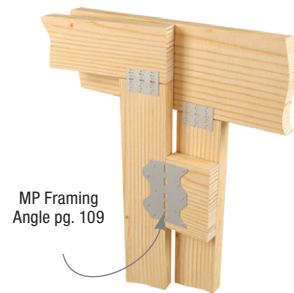
MSSH217R
Right shown attached to webs



MSSH217R
Right shown



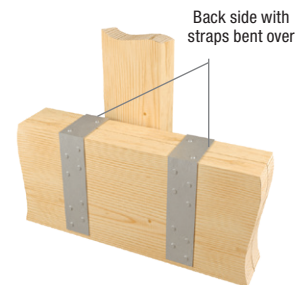
MSSH217R shown bent over bottom chord



Additional strapping for high uplift



Additional strapping for high uplift



Back view shown

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ^{2,3,5}							Girder Truss	DF/SP			S-P-F			Code Ref.	
			Mounting Condition	Supporting Member				Supported Member ⁴			Allowable Loads (Lbs.) ¹			Allowable Loads (Lbs.) ¹				
				Top		Face/ Backside		Member ⁴			Floor		Roof	Floor		Roof		
				Qty	Type						Qty	Type	100%	115%	125%	100%		115%
				Qty	Type	Qty	Type	Qty	Type		100%	115%	125%	100%	115%	125%		
MSSH217L/R	--	18	face-max	--	--	16	10d	1	10d x 1-1/2	1 Ply	1755	1770	1770	1140	1155	1165	--	
			top-min	4	10d	6	10d			1 Ply	1735	1735	1735	1140	1155	1165		

1) No uplift value with this hanger. Use other hardware or nailing higher on supported member to counteract uplift.

2) One or both straps may be bent over bottom chord of girder with top or backside nailing.

3) Maintain minimum 3/4" edge distance when installing nails.

4) The supported member shall be supported by blocking or other means to prevent rotation.

5) **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.

Note: The 3 lower holes on each strap are for top nailing when strap is bent. These holes are not for face nailing.