

HDO/S / HDOL/S Top Mount Bridle Hangers

Cold-Formed Steel Connectors

HDOL/S (14 ga) and HDO/S (12 ga) top mount bridle hangers are available in a wide variety of stock sizes to match the most common framing needs with economical solutions where custom or special order hangers were required before. The revolutionary design utilizes shear lag slots designed to maximize the capacity of the hangers while providing a safe and ductile connection.

The HDOL/S and HDO/S hangers may be installed with screws, powder actuated, or welded to the header.

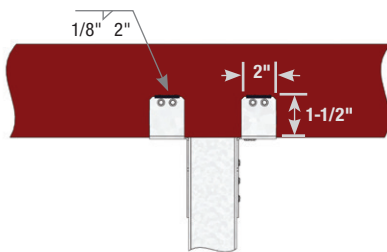
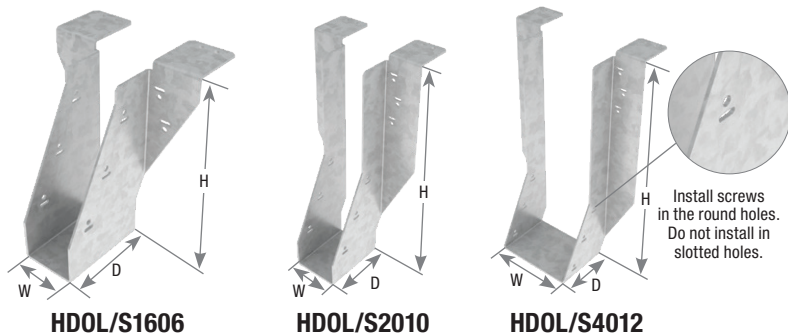
Materials: HDOL/S 68mil (14 gauge), HDO/S 97mil (12 gauge)

Finish: G90 galvanizing

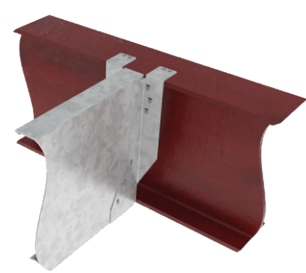
Patents: U.S. Patent No. 10,072,412

Installation:

- Install prescribed type and number of self-drilling screws in to the round holes of the hangers. Do not install screws in the shear lag slots.
- Powder actuated fasteners are permitted.
- Welding of the hangers is permitted. Place a minimum 1/8" x 2" fillet weld on each top flange of the hanger. Welding should be performed by a qualified welder using a qualified welding procedure while distributing the weld evenly across both flanges. Weld-on applications produce maximum allowable load listed. **Uplift loads do not apply to this application.**



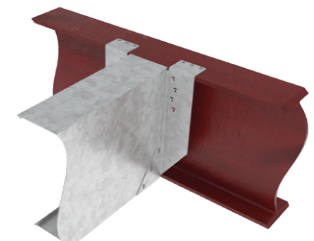
Top view detail of welds



Typical HDOL/S1616 (I-beam) installation



Typical HDOL/S2010 (CFS Header) installation



Typical HDOL/S4012 (I-beam) installation

MiTek USP Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule					Allowable Loads ^{1,2,3}	Code Ref.
			W	H	D	Header		Joist				
						Top Qty	Face Qty	Type ⁴	Qty	Type ⁴	Down 100%	
HDOL/S1606	S/LBV1.68/6	14	1-5/8	6	3	4	6	#10	3	#10	2950	--
HDO/S1606	S/B1.68/6	12			3-1/2	6	8				6140	
HDOL/S1608	S/LBV1.68/8	14	1-5/8	8	3	4	6	#10	3	#10	2950	
HDO/S1608	S/B1.68/8	12			3-1/2	6	8				6140	
HDOL/S1610	S/LBV1.68/10	14	1-5/8	10	3	4	6	#10	3	#10	2950	
HDO/S1610	S/B1.68/10	12			3-1/2	6	8				6140	
HDOL/S1612	S/LBV1.68/12	14	1-5/8	12	3	4	6	#10	3	#10	2950	
HDO/S1612	S/B1.68/12	12			3-1/2	6	8				6140	
HDOL/S2006	S/LBV2.06/6	14	2	6	3	4	6	#10	3	#10	2950	
HDO/S2006	S/B2.06/6	12			3-1/2	6	8				6140	
HDOL/S2008	S/LBV2.06/8	14	2	8	3	4	6	#10	3	#10	2950	
HDO/S2008	S/B2.06/8	12			3-1/2	6	8				6140	
HDOL/S2010	S/LBV2.06/10	14	2	10	3	4	6	#10	3	#10	2950	
HDO/S2010	S/B2.06/10	12			3-1/2	6	8				6140	
HDOL/S2012	S/LBV2.06/12	14	2	12	3	4	6	#10	3	#10	2950	
HDO/S2012	S/B2.06/12	12			3-1/2	6	8				6140	
HDOL/S4006	S/LBV4.06/6	14	4	6	3	4	6	#10	3	#10	2950	
HDO/S4006	S/B4.06/6	12			3-1/2	6	8				6140	
HDOL/S4008	S/LBV4.06/8	14	4	8	3	4	6	#10	3	#10	2950	
HDO/S4008	S/B4.06/8	12			3-1/2	6	8				6140	
HDOL/S4010	S/LBV4.06/10	14	4	10	3	4	6	#10	3	#10	2950	
HDO/S4010	S/B4.06/10	12			3-1/2	6	8				6140	
HDOL/S4012	S/LBV4.06/12	14	4	12	3	4	6	#10	3	#10	2950	
HDO/S4012	S/B4.06/12	12			3-1/2	6	8				6140	

1) Testing of HDOL/S and HDO/S hangers was performed with framing members with minimum steel yield strengths of Fy=50 ksi.
 2) Qualified designer shall design connection to ensure the header is designed to carry the load and the joist member is sufficient to transfer load to hanger.
 3) Allowable loads based on testing with 68 mil (14ga) CFS members for the HDOL/S hanger and 97 mil (12ga) CFS members for the HDO/S hanger.
 4) #10 screws are ITW Buildex 10-16 HWH Teks Structural Fasteners with a nominal diameter of 0.190". Self-drilling tapping screws with equivalent physical and strength properties may be used.

The FWH/S Fire Wall Hanger attaches to cold-formed steel wall framing to support cold-formed steel joists.

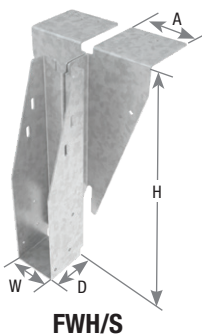
Materials: 14 gauge

Finish: G90 galvanizing

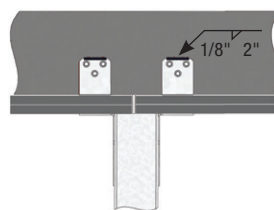
Options: See Specialty Options chart

Installation:

- Install prescribed type and number of self-drilling screws through the round holes into the wall track. Install (5) self-drilling screws through the hanger into one side of the joist using the round and slotted holes.
- Powder actuated fasteners are permitted.
- Welding of the hangers is permitted. Place a minimum 1/8" x 2" fillet weld on each top flange of the hanger. Welding should be performed by a qualified welder using a qualified welding procedure while distributing the weld evenly across both flanges. Weld-on applications produce maximum allowable load listed. **Uplift loads do not apply to this application.**



FWH/S



Top view detail of welds

Geometry Table

MiTek USP Stock No.	Ref. No.	Dimensions (in)				Code Ref.
		W	H	D	A	
FWH/S1608	--	1-11/16	7-7/16	2	2-3/4	--
FWH/S1610	--	1-11/16	9-7/16	2	2-3/4	
FWH/S1612	--	1-11/16	11-7/16	2	2-3/4	
FWH/S2008	--	2-1/16	9-7/16	2	2-3/4	
FWH/S2010	--	2-1/16	11-13/16	2	2-3/4	
FWH/S2012	--	2-1/16	13-15/16	2	2-3/4	
FWH/S2508	--	2-9/16	7-7/16	2	2-3/4	
FWH/S2510	--	2-9/16	9-7/16	2	2-3/4	
FWH/S2512	--	2-9/16	11-7/16	2	2-3/4	

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

Fastener / Allowable Load Table

Installation Type	Description	Fastener Schedule				Joist Steel Thickness	Allowable Download (Lbs.)		
		Header		Joist Qty	Type ^{1,2}		Without Bearing Stiffeners	With ³ Bearing Stiffeners	Uplift
		Top Qty	Face Qty						
Figure 1	14Ga 6" CFS Track (1-1/4" Leg) with 14Ga 6" Stud Directly Below	6	--	5	#10 Self-Tapping	54 mil	625	1165	180
						68 mil	875	1800	
						97 mil	1750	1800	
Figure 2	14Ga 6" CFS Deep Track (3" Leg) with No Stud Directly Below	6	2	5	#10 Self-Tapping	54 mil	625	1165	380
						68 mil	875	1220	
						97 mil	1750	1220	
Figure 3	14Ga 6" CFS Deep Track (3" Leg) with 14Ga 6" Stud Directly Below	6	2	5	#10 Self-Tapping	54 mil	625	1165	380
						68 mil	875	2200	
						97 mil	1750	2200	
Figure 4	HSS 6x2x3/16 on 14Ga CFS Track (1-1/4" Leg) with No Stud Directly Below	6	--	5	#10 Self-Tapping	54 mil	625	1165	180
						68 mil	875	2200	
						97 mil	1750	2200	

1) Tested with Buildex #10-16 Tek Hex Washer Head self drilling/tapping screws. Equivalent strength fasteners with other head styles may also be used.

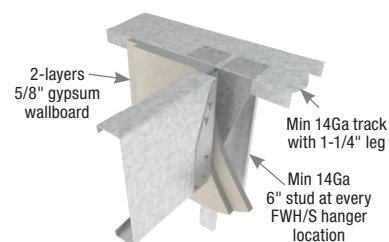
2) Larger self-drilling/tapping screws may be used with no reduction in load carrying capacity.

3) Tested with 400T125-68 bearing stiffener. Thicker gauge bearing stiffeners may also be used.

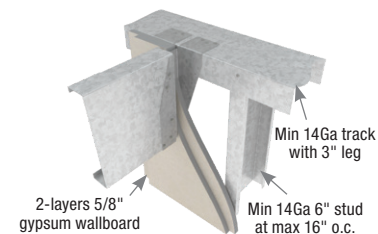
Specialty Options Chart – Refer to Specialty Options pages 320 and 322 for additional details.

Option	Skewed ¹	Top Flange Offset
Range	1° to 70°	--
Allowable Loads	70% of table load	70% of table download. 180 lbs. Max uplift
Ordering	Add <i>SK</i> , angle required, right (<i>R</i>) or left (<i>L</i>), and square cut (<i>SQ</i>) to product number. Ex. FWH/S2010_SK45R_SQ	Add <i>OS</i> , and right (<i>R</i>) or left (<i>L</i>), to product number. Ex. FWH/S2010_OL

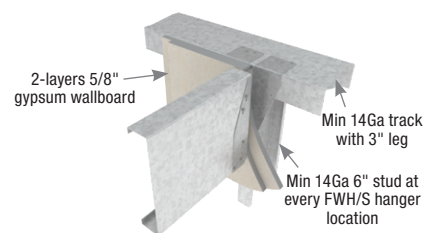
1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.



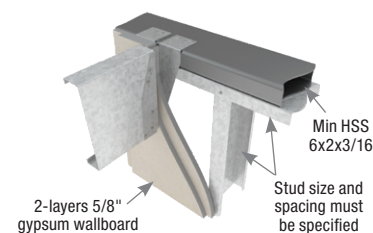
Typical FWH/S shallow-track-aligned installation
Figure 1



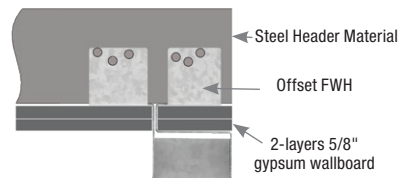
Typical FWH/S deep-track installation
Figure 2



Typical FWH/S deep-track aligned installation
Figure 3



Typical FWH/S continuous HSS installation
Figure 4



Typical FWH top flange offset, left shown (Top View)