



Residential North America

Product Evaluation Report
MiTek® Inc.
UMH Universal Masonry Hangers

Florida Product Approval # FL 5631
Florida Building Code
Per Rule 61G20-3
Method 1-d

Category: Structural Components
Subcategory: Wood Connector
Compliance Method: 61G20-3.005(1)(d)
HVHZ

Product Manufacturer:

MiTek Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Engineer Evaluator:

Steven Brekke P.E.
FL P.E. #70432

Validator:

Johnathan Green, P.E.
FL P.E. #88223

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MiTek Inc.
16023 Swingley Ridge Road
Chesterfield, MO 63017-5746
uspcustomerservice@mii.com
1-800-328-5934



Compliance Statement:

The product as described in this report has demonstrated compliance with the Florida Building Code, Sections 2303.5, 2304.10.3, 2321.5, 2321.7.

Product Description:

The UMH Universal Masonry Hangers consists of a steel hanger to connect a wood member to a masonry wall. The hangers are used to transfer load between members.

Product Material:

3 Ga. Steel ASTM A36, primer finish

Materials:

Wood

Wood members must be Douglas Fir with a minimum specific gravity (G) of 0.50, or an approved member with an equivalent specific gravity (G) of 0.50 or greater. Wood members shall have a moisture content not exceeding 19 percent (16 percent for structural engineered lumber). Wood members must be used under continuously dry conditions and where sustained temperatures are limited to 100° F.

Preservative and Fire-Retardant-treated Wood

Connectors or fasteners used in contact with preservative-treated and fire-retardant-treated wood shall be in accordance with Section 2304.10.5.

Nail

Nails shall meet the requirements in Table and the Requirements specified in ASTM F 1667.

Fasteners

Required fastener types and sizes are specified in the Table.

Masonry

Material and quality of masonry construction must comply with the applicable sections of the FBC.

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Design Procedure:

The allowable loads shown in the Table are based on allowable stress design and include a 60% increase for wind and seismic load conditions per Section 11.3.2 of the NDS. No further increases are permitted.

The allowable loads are based on wood members with a moisture content not exceeding 19 percent (16 percent for structural engineered lumber). If moisture content exceeds this value, a wet service factor, C_m , must be applied per Section 11.3.3 of the NDS. The allowable loads are based on wood members under continuously dry conditions and where sustained temperatures are limited to 100° F. Wood members that will experience sustained exposure to temperatures exceeding 100°F shall be adjusted by the temperature factor, C_t , per Section 11.3.4 of the NDS.

Wood members to which the anchor is attached must be designed by a registered design professional per the FBC. Masonry constructions must be a minimum of C90, fully grouted, CMU block designed by a registered design professional per the FBC or cast in place concrete with a minimum compressive strength of 3,000 psi.

Installation:

Install the hanger in accordance with this evaluation report and the manufacturer's installation instructions.

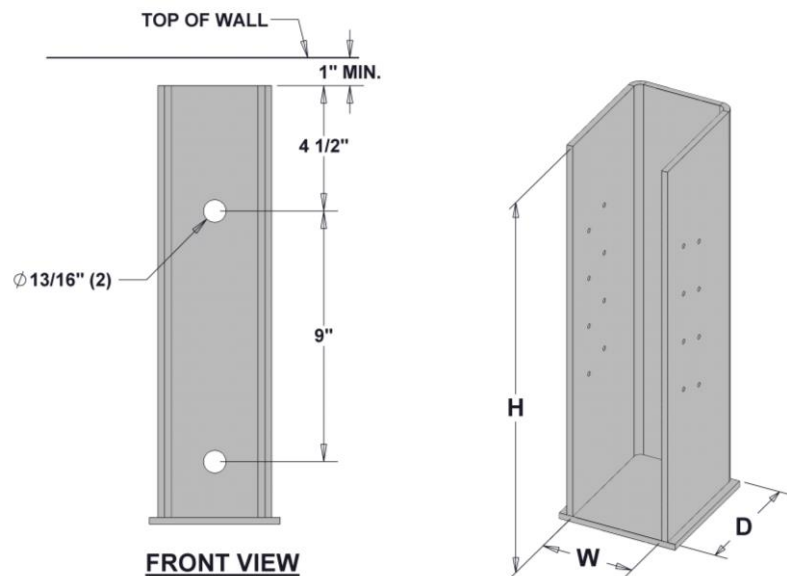
Testing and Specification:

1. ASTM D1761-88 Test Report No.04-4961 by Product Testing, Inc.
2. ASTM D 1761 to ASTM D7147-11 comparison letter, sealed by Steven A. Brekke, P.E.
3. ANSI/AWC National Design Specifications for Wood Construction (NDS) 2018

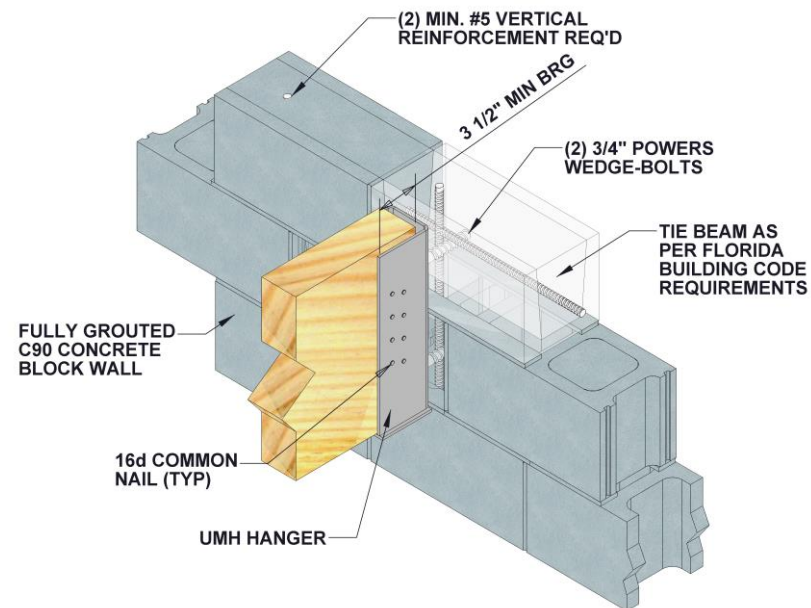
Quality Assurance Entity:

The manufacturer has established compliance in accordance with Florida Building Code and Rule 61G20-3.005 (3) for the manufacturing assurance program audited by an approved quality assurance entity.

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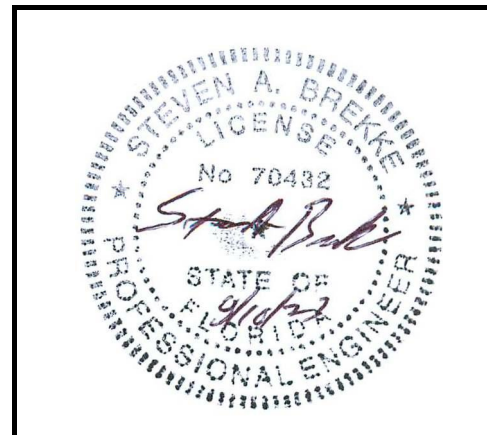


Typical UMH installation

Stock Number	Steel Gage	Dimensions (inches)			Fastener Schedule				DF/SP Allowable Loads (lbs)							
					Header		Joist		Masonry - 2500 psi				Cast in Place Concrete - 3,000 psi			
		W	H	D	Qty	Bolt Dia. (in.)	Qty	Nail Type	Floor 100%	Roof		Uplift 160%	Floor 100%	Roof		Uplift 160%
										115%	125%			115%	125%	
UMH358	3	3 5/8	15 1/2	5	2	3/4	16	16dC	3550	3550	3550	3550	6380	6380	6380	4815
UMH458	3	4 5/8	15 1/2	5	2	3/4	16	16dC	3550	3550	3550	3550	6380	6380	6380	4815
UMH538	3	5 3/8	15 1/2	5	2	3/4	16	16dC	3550	3550	3550	3550	6380	6380	6380	4815
UMH558	3	5 5/8	15 1/2	5	2	3/4	16	16dC	3550	3550	3550	3550	6380	6380	6380	4815
UMH718	3	7 1/8	15 1/2	5	2	3/4	16	16dC	3550	3550	3550	3550	6380	6380	6380	4815

For SI: 1 inch = 25.4 mm, 1 psi = 6.89 kPa, 1 lbf = 4.45 N

- Uplift loads have been increased 60% for wood or seismic loads; no further increase shall be permitted.
- A 16dC Common Nail is 3-1/2 inches long and 0.162-inch in diameter.
- Fasten UMH hangers to concrete masonry structure with (2) 3/4" diameter Powers Fasteners Wedge-Bolt+ or DeWalt Screw-Bolt+ screw anchors or equal with 5" minimum embedment. Screw anchors shall be installed in masonry with grouted cells in accordance to manufacturer's installation specifications.
- Minimum anchor edge distance is 5-1/4" in all directions.
- Supporting wall must be fully grouted and reinforced concrete block or cast-in-place concrete with a minimum of (2) #5 rebar continuous to footing with standard hook at bolt locations.



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16023 Swingley Ridge Road
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mittek-us.com

Name: UMH Universal Masonry Hanger

Sheet 1	Steven Brekke PE
Date:	PROFESSIONAL ENGINEER
8/9/2023	License #: 70432