

MBHA Masonry Hangers

The MBHA is a single piece, non-welded connector available for solid sawn, truss and engineered wood products.

MATERIAL: 10 gauge

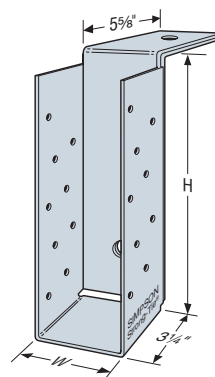
FINISH: Galvanized

INSTALLATION: • Use all specified fasteners. See General Notes.

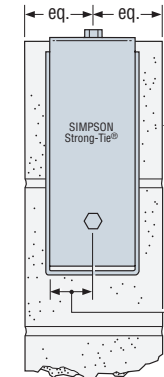
OPTIONS: See Hanger Options, pages 181-183.

CODES: See page 12 for Code Reference Key Chart.

Model No.	C	Dimensions	
		W	H
MBHA3.12/9.25	1 $\frac{1}{16}$	3 $\frac{1}{8}$	9 $\frac{1}{4}$
MBHA3.12/11.25	1 $\frac{1}{16}$	3 $\frac{1}{8}$	11 $\frac{1}{4}$
MBHA3.56/7.25	1 $\frac{3}{4}$	3 $\frac{3}{16}$	7 $\frac{1}{4}$
MBHA3.56/9.25	1 $\frac{3}{4}$	3 $\frac{3}{16}$	9 $\frac{1}{4}$
MBHA3.56/11.25	1 $\frac{3}{4}$	3 $\frac{3}{16}$	11 $\frac{1}{4}$
MBHA3.56/11.88	1 $\frac{3}{4}$	3 $\frac{3}{16}$	11 $\frac{7}{8}$
MBHA3.56/14	1 $\frac{3}{4}$	3 $\frac{3}{16}$	14
MBHA3.56/16	1 $\frac{3}{4}$	3 $\frac{3}{16}$	16
MBHA3.56/18	1 $\frac{3}{4}$	3 $\frac{3}{16}$	18
MBHA5.50/7.25	2 $\frac{3}{4}$	5 $\frac{1}{2}$	7 $\frac{1}{4}$
MBHA5.50/9.25	2 $\frac{3}{4}$	5 $\frac{1}{2}$	9 $\frac{1}{4}$
MBHA5.50/11.25	2 $\frac{3}{4}$	5 $\frac{1}{2}$	11 $\frac{1}{4}$
MBHA5.50/11.88	2 $\frac{3}{4}$	5 $\frac{1}{2}$	11 $\frac{7}{8}$
MBHA5.50/14	2 $\frac{3}{4}$	5 $\frac{1}{2}$	14
MBHA5.50/16	2 $\frac{3}{4}$	5 $\frac{1}{2}$	16
MBHA5.50/18	2 $\frac{3}{4}$	5 $\frac{1}{2}$	18



MBHA



Typical MBHA Installation

Minimum one #5 rebar located in top course

C From edge to C of bolt

Model No.	Fasteners ¹			Solid Concrete Allowable Loads DF/SP		Grouted CMU Allowable Loads DF/SP		Code Ref.
	Header		Joist	Uplift ⁷ (160)	Maximum Down Load	Uplift ⁷ (160)	Maximum Down Load	
	Top	Face						
MBHA	1-ATR $\frac{3}{4}$ ⁴	1-ATR $\frac{3}{4}$ ⁴	18-10d	3775	6050	3475	5330	I20, F19
MBHA models with H = 7 $\frac{1}{4}$	1-ATR $\frac{3}{4}$ ⁴	1-ATR $\frac{5}{8}$ ⁵	18-10d	1885	4380	1885	4380	

- ATR is all threaded rod.
- Minimum concrete strength f'_c shall be 2500 psi. CMU shall have a minimum grout strength of 2500 psi with standard ASTM C90 units and type N or S mortar.
- Uplift loads have been increased 60% for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
- Loads are based on installation using Simpson Strong-Tie® ET Epoxy-Tie® adhesive 6 $\frac{3}{4}$ " minimum embedment required. All thread rods to be $\frac{3}{4}$ " diameter, grade A307 or better. Refer to the Simpson Strong-Tie® *Anchoring and Fastening*

- Systems for Concrete and Masonry catalog (form C-SAS – see page 191 for details).
- MBHA hangers with height of 7 $\frac{1}{4}$ " require a 3 $\frac{1}{2}$ " minimum embedment of the face bolt using ET Epoxy-Tie adhesive. All thread rods to be $\frac{3}{4}$ " diameter, grade A307 or better.
- Additional anchorage products to be designed by others.
- Uplift loads are for Southern Pine. For Doug Fir use 3515 lbs.
- Table allowable loads were determined using test ultimate/3 or fastener calculation values.
- NAILS:** 10d = 0.148" dia. x 3" long. See page 16-17 for other nail sizes and information.

ITTM Engineered Wood Products Hangers



This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

ITTM masonry-to-wood connectors can be directly embedded into a grouted block wall. It can also be installed on top of a masonry or concrete wall using Titen® screws.

MATERIAL: 12 gauge top flange and 18 gauge stirrup

FINISH: Galvanized

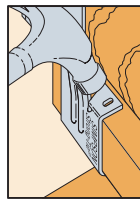
INSTALLATION: • Use all specified fasteners.

- ITTM installed into grouted block wall: embed into block with a minimum of one course of grouted block above and one course below the top flange. No Titen screws required.
- ITTM installed on concrete masonry wall: install $\frac{1}{4}$ "x1 $\frac{1}{4}$ " hex head Titen screws through preformed holes on the hanger.

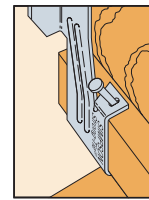
OPTIONS: • Options not available.

CODES: See page 12 for Code Reference Key Chart.

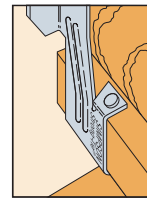
ITTM INSTALLATION



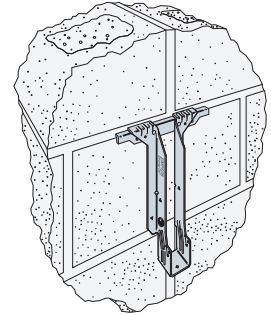
Bend the tab with a hammer.



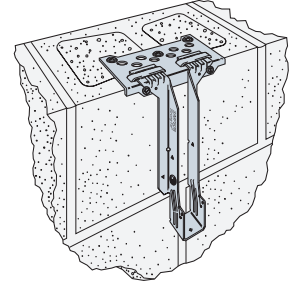
Hammer 10d x 1 $\frac{1}{2}$ nail in at approximately 45°.



The tab is now correctly installed.



Typical Mid-Wall ITTM Installed into Concrete Block (No Titen required)
U.S. Patent 5,555,694



Typical Top-of-Wall ITTM Installed on a Grouted Block with Titen

Model	Fasteners			Allowable Loads Header Type			Code Ref.
	Top	Face	Joist	Uplift ¹ (160)	Applications	Masonry	
ITTM411.88	—	—	2-10dx1 $\frac{1}{2}$	—	MID-WALL INSTALLATION ⁴	1665	170
ITTM414	—	2-Titens ²	2-10dx1 $\frac{1}{2}$	225	MID-WALL INSTALLATION ⁴	1665	
ITTM416	3-Titens ²	2-Titens ²	2-10dx1 $\frac{1}{2}$	225	TOP OF WALL INSTALLATION	1545	

- Uplift loads are based on DF/SP lumber and have been increased 60% for wind or earthquake loading with no further increase allowed. For normal loading applications such as cantilever construction refer to Simpson Strong-Tie® Connector Selector™ software or conservatively divide the uplift load by 1.6. For SPF use 0.86 x DF/SP uplift load.
- Titen masonry screws are $\frac{1}{4}$ " x 1 $\frac{1}{4}$ ".
- Minimum f'_m = 1500 psi and f'_c = 2500 psi.
- Mid-wall installation requires minimum of one grouted course above and below the hanger.
- Products shall be installed such that the Titen screws are not exposed to the weather.
- NAILS:** 10dx1 $\frac{1}{2}$ = 0.148" dia. x 1 $\frac{1}{2}$ " long. See page 16-17 for other nail sizes and information.