

MTSM/HTSM

Twist Straps

The MTSM and HTSM offer high-strength truss-to-masonry connections.

Material: MTSM — 16 gauge;

HTSM — 14 gauge

Finish: Galvanized

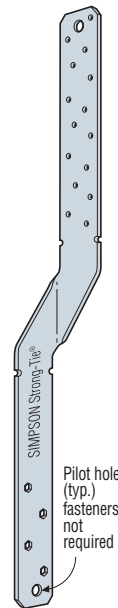
Installation:

- Use all specified fasteners; see General Notes
- Installs with hex-head Titen Turbo™ screws
- Attach to either side of grouted concrete block with a minimum one #5 rebar horizontal
- MTSM and HTSM can be field bent once to a 45° angle
- Products shall be installed such that Titen Turbo screws are not exposed to the exterior environment.

Codes: See p. 13 for Code Reference Key Chart

Web Applications:

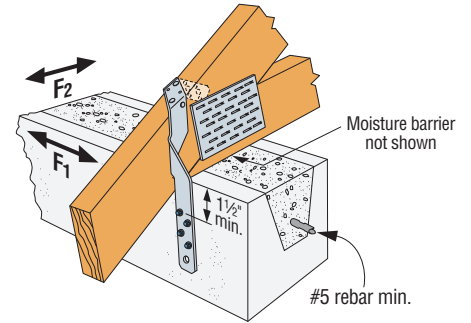
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HTSM20
(MTSM20 similar)



MTSM16
(HTSM16 similar)



Typical MTSM20 Installation
(HTSM20 similar)

Model No.	L (in.)	Fasteners (in.)			DF/SP Allowable Loads	SPF/HF Allowable Loads	DF/SP/SPF/HF Allowable Lateral Loads		Code Ref.
		Truss/Rafter	GFCMU Titen Turbo	Concrete Titen Turbo			F ₁ (160)	F ₂ (160)	
MTSM16	16	(7) 0.148 x 1 1/2	(4) 1/4 x 2 1/4	(4) 1/4 x 1 3/4	830	715	120	90	FL
MTSM20	20	(7) 0.148 x 1 1/2	(4) 1/4 x 2 1/4	(4) 1/4 x 1 3/4	830	715			
HTSM16	16	(8) 0.148 x 1 1/2	(4) 1/4 x 2 1/4	(4) 1/4 x 1 3/4	1,110	955			
HTSM20	20	(10) 0.148 x 1 1/2	(4) 1/4 x 2 1/4	(4) 1/4 x 1 3/4	1,110	955			

1. Loads have been increased for wind or earthquake loading, with no further increase allowed. Reduce where other loads govern.

2. Twist straps do not need to be wrapped over the truss to achieve the allowable load.

3. Minimum edge distance for Titen Turbo screw is 1 1/2".

4. See p. 367 for Titen Turbo screw information.

5. Concrete shall have a minimum compressive strength of $f'_c = 2,500$ psi.

6. Grout-filled CMU (GFCMU) shall have a minimum compressive strength of $f'_m = 1,500$ psi.

7. Lateral loads apply when the first seven nail holes on the truss/rafter near the bend line are filled.

Any other fasteners required can be installed in any open hole.

8. **Fasteners:** Nail dimensions are listed diameter by length. Titen Turbo screws are Simpson Strong-Tie concrete and masonry screws (hex-head model required). See pp. 23–24 for fastener information.