

MTSM/HTSM

Twist Straps

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

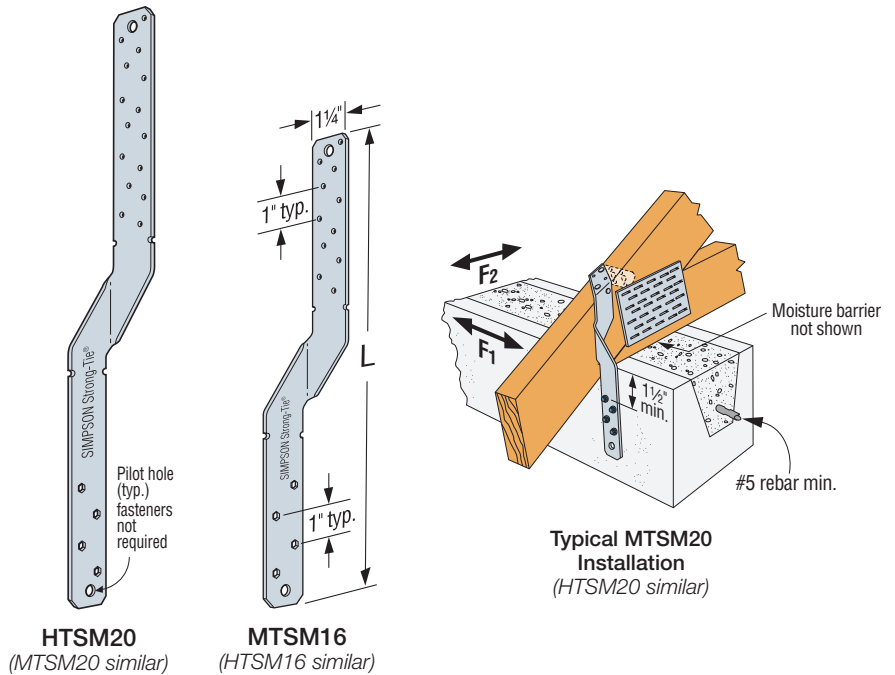
Material: MTSM — 16 gauge;
HTSM — 14 gauge

Finish: Galvanized; see Corrosion Information, pp. 12–15

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. 11 for Code Reference Key Chart



| Model No. | L (in.) | Fasteners (in.) | | | DF/SP Allowable Loads | SPF/HF Allowable Loads | Allowable Lateral Loads (DF/SP/SPF/HF) | | 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. 353 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. 21–22 for fastener information.