

EMBEDDED TRUSS/RAFTER TO MASONRY/CONCRETE

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

Model No.	Qty. Req'd	Application	SP Uplift One-Ply Truss		SP Uplift Two- or Three-Ply Truss		SP Lateral Load	
			Fasteners to Truss/Rafter (Total)	(160)	Fasteners to Truss/Rafter (Total)	(160)	Parallel to Plate (F ₁)	Perpendicular to Plate (F ₂)
HETAL12 ³	1	Block/Concrete	10-10dx1½	1085	10-16d	1270	415	1100
(META20 Only)								
META12, META14 META16, META18, META20, META22, META24, META40	1	Block/Concrete	7-10dx1½	1450	6-16d	1450	340	725
HETA12	1	Block/Concrete	7-10dx1½	1520	7-16d	1780	340	725
HHETA12	1	Block/Concrete	7-10dx1½	1565	7-16d	1820	340	725
(HETA20 Only)								
HETA16, HETA18, HETA20, HETA22, HETA24, HETA40	1	Block/Concrete	9-10dx1½	1810	8-16d	1810	340	725
(HETA20 Only)								
HETAL16 ³ HETAL20 ³	1	Block/Concrete	14-10dx1½	1810	13-16d	1810	415	1100
HHETA16, HHETA18, HHETA20, HHETA22, HHETA24, HHETA40	1	Block/Concrete	10-10dx1½	2235	9-16d	2235	340 ⁶	725
(META20 Only)								
META12, META14, META16, META18, META20, META22, META24, META40	2 ⁸	Block	10-10dx1½ ⁹	1985	14-16d ⁹	1900	1210 ^{10,11}	1160 ¹⁰
		Concrete	10-10dx1½ ⁹	1985	14-16d ⁹	2565		
(HETA20 Only)								
HETA12, HETA14, HETA16, HETA18, HETA20, HETA22, HETA24, HETA40	2 ⁸	Block	10-10dx1½ ⁹	2035	12-16d ⁹	2500	1225 ^{10,11}	1520 ¹⁰
		Concrete	10-10dx1½ ⁹	2035	12-16d ⁹	2700		
(HETA20 Only)								
HHETA12, HHETA14 HHETA16, HHETA18, HHETA20, HHETA22	2 ⁸	Block	10-10dx1½ ⁹	2035	12-16d ⁹	2500	1225 ^{10,11}	1520 ¹⁰
		Concrete	10-10dx1½ ⁹	2035	14-16d ⁹	3350		
(NEW)								
DETAL20 ¹⁶	1	Block	18-10dx1½	2480	—	—	2000 ¹⁷	1370
		Concrete	18-10dx1½	2480	—	—	2000	1505

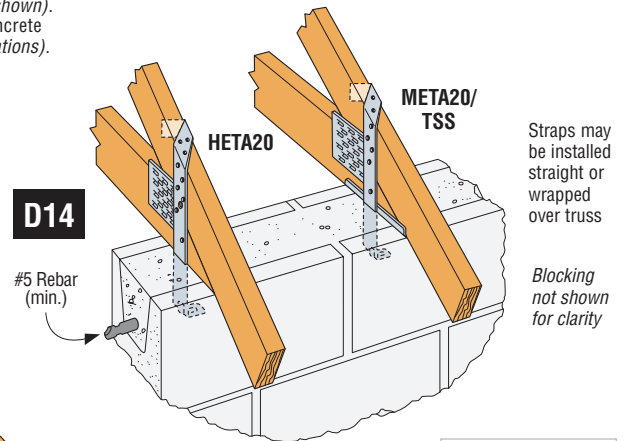
- For SPF trusses multiply table loads by 0.86 for uplift and F₂ directions (use F₁ values as shown).
- Unless noted otherwise, embedment is into either grout filled block (f' m = 1500 psi) or concrete (minimum f' c is 2000 psi for single strap installations and 2500 psi for double strap installations).
- The HETAL requires 5 nails to be installed into the truss seat.
- Multiple META, HETA, and HHETA are spaced at 1½" for single ply and 3½" for two ply and staggered as shown.
- Allowable loads in the F₁ direction are not intended to replace diaphragm boundary members or prevent cross grain bending of the truss or rafter members.
- The HHETA allowable F₁ load can be increased to 435 lbs. if the strap is wrapped over the truss and a minimum of 12 nails are installed.
- For simultaneous loads in more than one direction, the connector must be evaluated as described in Note 7, page 8 under General Notes.
- Where noted, install with spoons facing outward and straps spaced no more than ½" wider than the truss width.
- Where noted, install half of the required number of fasteners in each strap.
- Double embedded anchor lateral loads apply only to two- or three-ply applications with anchors spaced a minimum of 3" apart. For single-ply applications use lateral loads from the Single Embedded Anchor Installation.
- Where noted in table, F₁ lateral loads listed may cause an additional ¼" deflection beyond the standard ¼" limit where the straps are installed not wrapped over the heel as shown.
- Two HHETA anchors may be installed in a concrete tie beam on a two- or three-ply truss with 2 fewer nails for an allowable uplift load of 3050 lbs.
- Single-ply trusses may use either 10dx1½ or 16d nails with allowable loads as noted in table. Two- or three-ply trusses shall use 16d nails.
- It is acceptable to use a reduced number of fasteners provided that there is a reduction in uplift load capacity. Lateral loads do not apply when fewer than 7 fasteners are used with the HETA and HHETA anchors or when fewer than 6-16d or 7-10dx1½ fasteners are used with the META anchor. HETAL lateral loads do not apply when fewer than 5 fasteners are installed in strap – 5 fasteners required in the truss seat. DETAL lateral loads do not apply when fewer than 5 fasteners are installed in each strap – 6 fasteners required in the truss seat. Calculate the connector uplift value for a reduced number of fasteners as follows:

$$\text{Allowable Load} = \frac{\text{No. of Nails Used}}{\text{No. of Nails in Table}} \times \text{Table Load}$$

Example: META20 in DF/SP with 6-10dx1½ nails total (160)

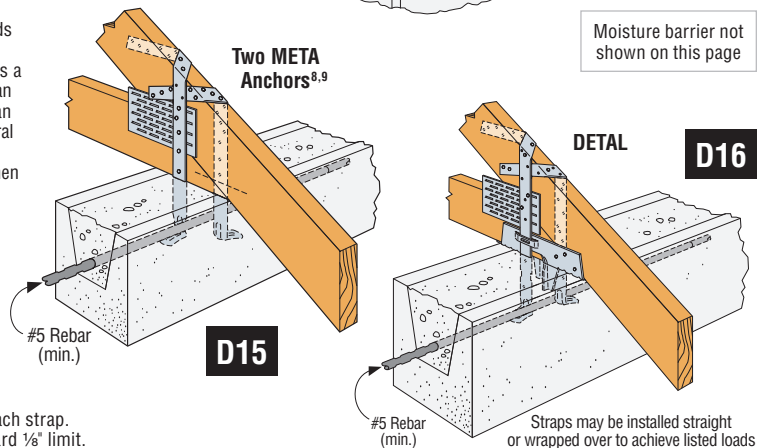
$$\text{Allowable Load} = \frac{6 \text{ Nails (Used)}}{7 \text{ Nails (Table)}} \times 1450 \text{ lbs.} = 1240 \text{ lbs.}$$

- Parallel-to-wall load towards face of HETAL is 1975 lbs.
- The DETAL20 requires 6 nails installed in the truss seat and 6 nails in each strap.
- F₁ lateral load may cause an additional ½" deflection beyond the standard ¼" limit.



Straps may be installed straight or wrapped over truss

Blocking not shown for clarity



Moisture barrier not shown on this page

Straps may be installed straight or wrapped over to achieve listed loads