

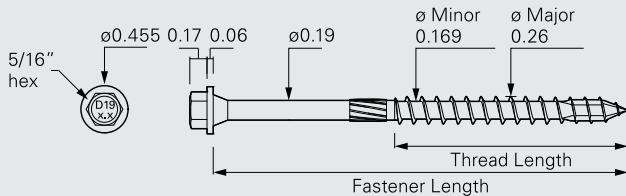


Truss or Rafter to Top Plate

Structural H19

Starborn® Structural H19 Truss to Top Plate / Multipurpose screws can be used to attach wood trusses and rafters to wall top plates in accordance with IRC Section R602 or IBC Section 2308. They are an alternative to toe-nail connections, metal hurricane ties and seismic clips.

Structural H19



Installation Instructions

- Select the proper length screw according to Table 2.
- Install using a high-torque low-speed drill with a 5/16" hex driver bit. Pre-drilling is not required, but can be used where lumber is prone to splitting.
- Drive screw upward through the top plate/s into the center of the truss or rafter at the proper angle noted below within 1/4" of the centerline.

Between Studs Install at an angle between 20–30° with an optimal angle of 22.5° (Figure 2). Option: Install at a 90° angle (Figure 3).

At Studs Install at an angle between 20–30° with an optimal angle of 22.5°.

With Top Plate Splice If the truss or rafter is located directly over a top plate splice, install with an offset of 1/4" to one side of splice. Install at an angle between 20–30° with an optimal angle of 22.5°.

- Adjust the installation angle to ensure the screw does not protrude out of the wood truss or rafter. Screw head may be countersunk to avoid interfering with interior finishes.

Corrosion Resistance

- Structural H19 screws feature a high-adhesion exterior grade coating and are a code compliant alternative to hot-dip galvanized fasteners. The coating is approved for use in ACQ, Fire Retardant Treated (FRT), and other pressure treated lumbers.
- Structural H19 screws are not designed for use in or near saltwater environments.

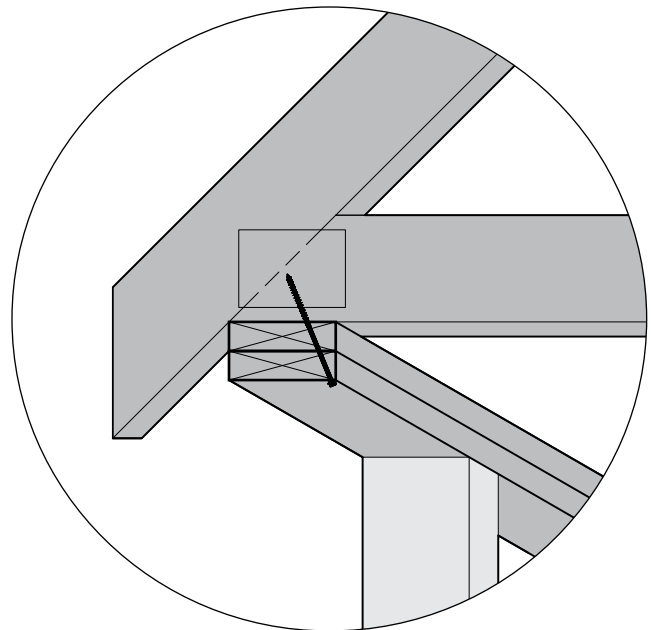


Figure 1

Table 1: Screw Properties

Product Name	Head Marking	Unthreaded Shank Diameter (in)	Head Type	Screw Length (in)	Thread Length (in)
Structural H19	D19 4	0.19	Hex 5/16"	4	2-1/4
	D19 6			6	2-1/2

For the most up to date version of this Technical Guide and more detailed information contained in the Truss or Rafter to Top Plate and Bottom Plate to Rim Board code compliance report (DrJ TER 1703-02), visit starbornindustries.com. For applications outside the scope of this Technical Guide, an engineered design is required.

Truss or Rafter to Top Plate Structural H19

Figure 2—Uplift and Lateral Load Orientations

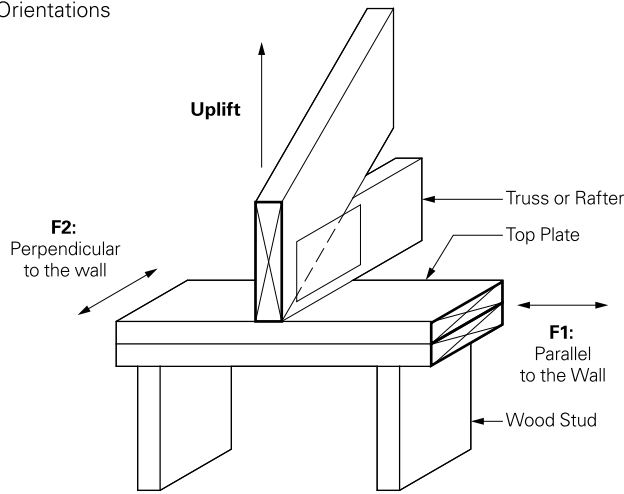


Figure 3—Installation at 20–30°

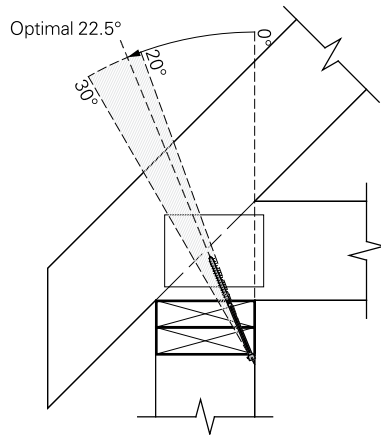


Figure 4—Installation at 90°

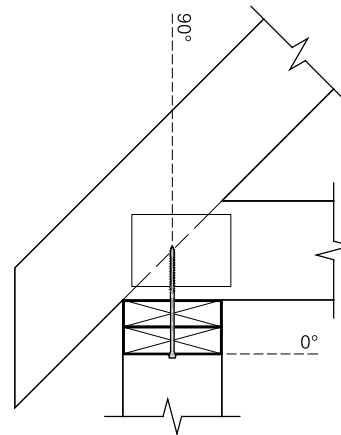


Table 2: Allowable Loads for Uplift and Lateral Resistance

Screw Length (in)	Top Plate	Screw Angle to Truss	Uplift (lbf)	Lateral (lbf)	
				F1: Parallel to Wall	F2: Perpendicular to Wall
4	Single	20-30°	340	230	270
		90°	325	195	375
6	Double	20-30°	415	170	335
		90°	295	280	395

1. Wood truss or rafter minimum of 2x nominal thickness.
2. Wood framing members shall be Spruce-Pine-Fir (SPF) or any species, including engineered wood, with a specific gravity of 0.42 or greater.

3. Design values include an increase of wood load duration (C_D) = 1.6. No further increases permitted.
4. Minimum 2" penetration.

lbf = pound-force