

Facing a very competitive housing market, home builders know that every dime saved is important. Originally used for mobile home design, the Hinge Plates has been adopted by a lot of truss manufacturers in situations where the trusses are too tall to transport safely and would otherwise have to be built and shipped as two separate pieces and assembled on the job site. Hinged Top Chord Trusses eliminate having separate piggyback trusses and reduce shipping cost, the number of trusses that need to be erected, the amount of field connections on the job, and the amount of bracing required in a truss system.

This is accomplished with a combination of the MiTek MTH18 and MTHNH18 hinge plates as shown in Figure 1 below.

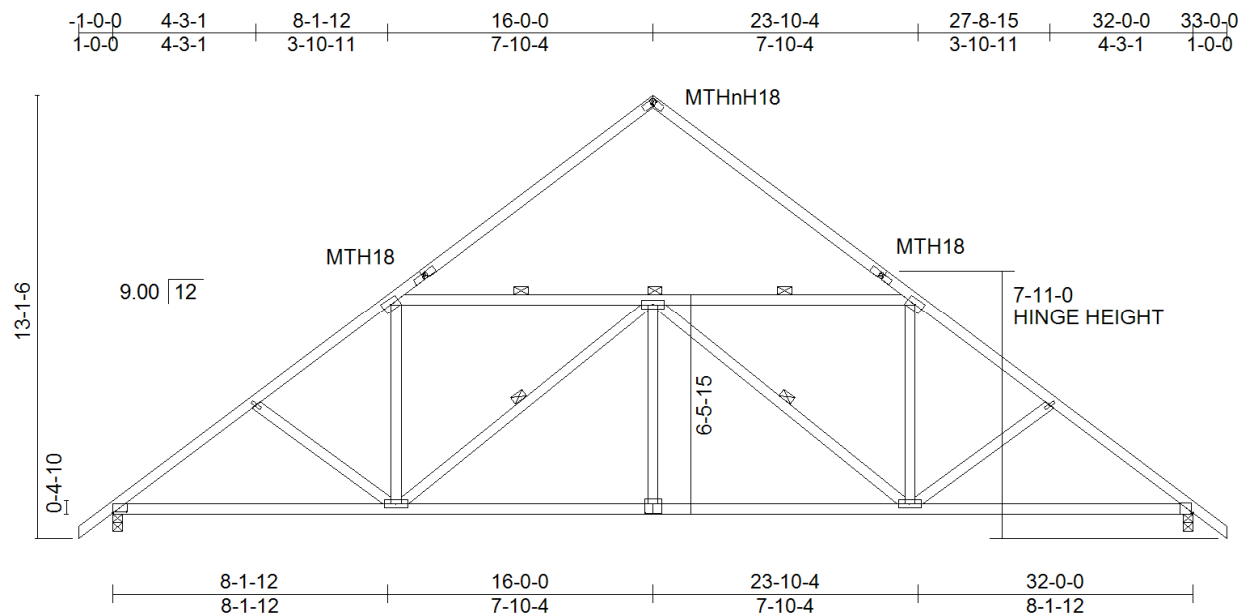
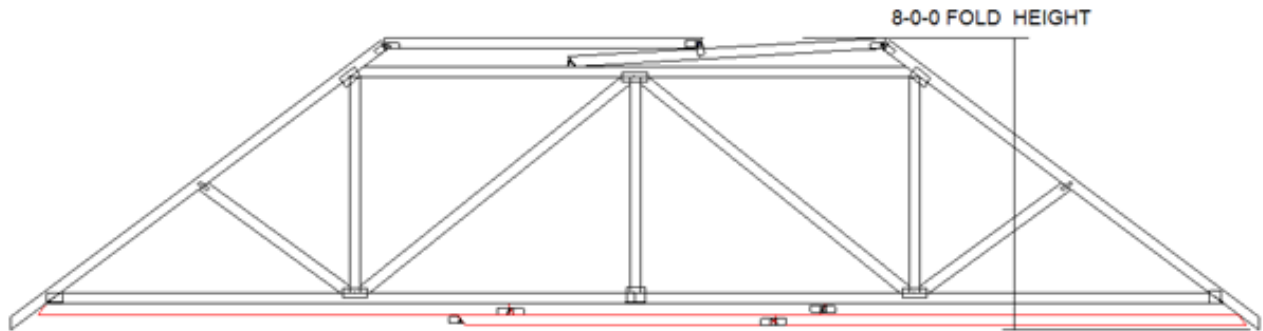


Figure 1

MTH18 and MTHNH18 hinge plates are in the MiTek design software. Notice in Figure 1 that there are only three rows of lateral bracing along the flat section where there would have been eight rows with a normal piggy back truss. In some cases, the hinge truss will only require one row of lateral bracing.

There are also no 6 feet scabs to attach, as with the cap and base truss piggyback.

Manufacturing a single hinge truss takes less time. There is only one setup, not the two setups required to build separate base and cap trusses, and there is no need to make sure that two separate trusses match up. With the pre-spliced TC's folded, they are ready to complete the truss. The upper hinged chords are secured to the lower chords with the MTHNH18 plates.

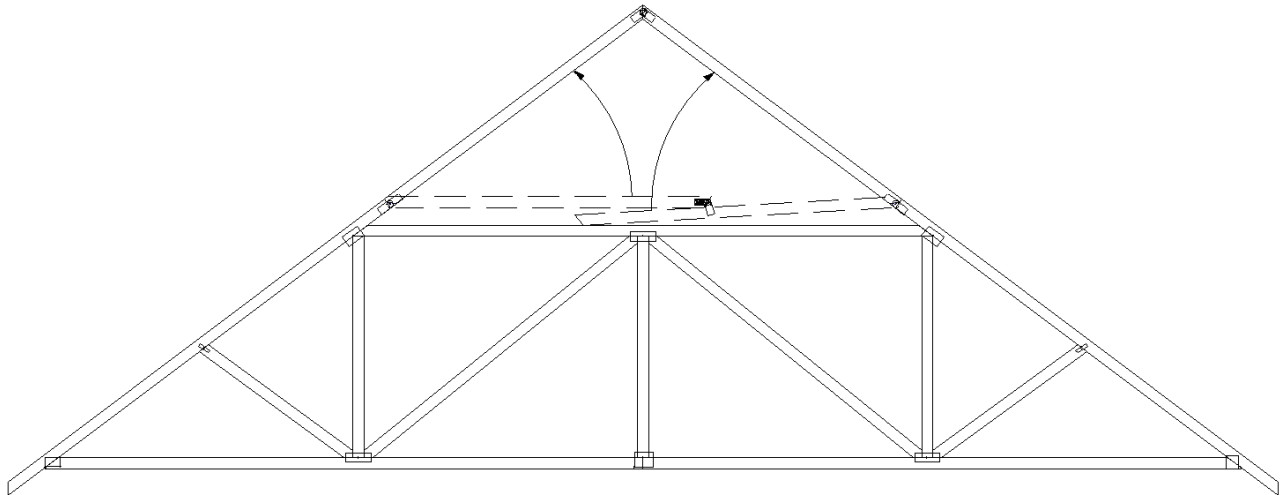


*Figure 2*

*Top chords are pre-sliced in the straight position ready for the next truss*

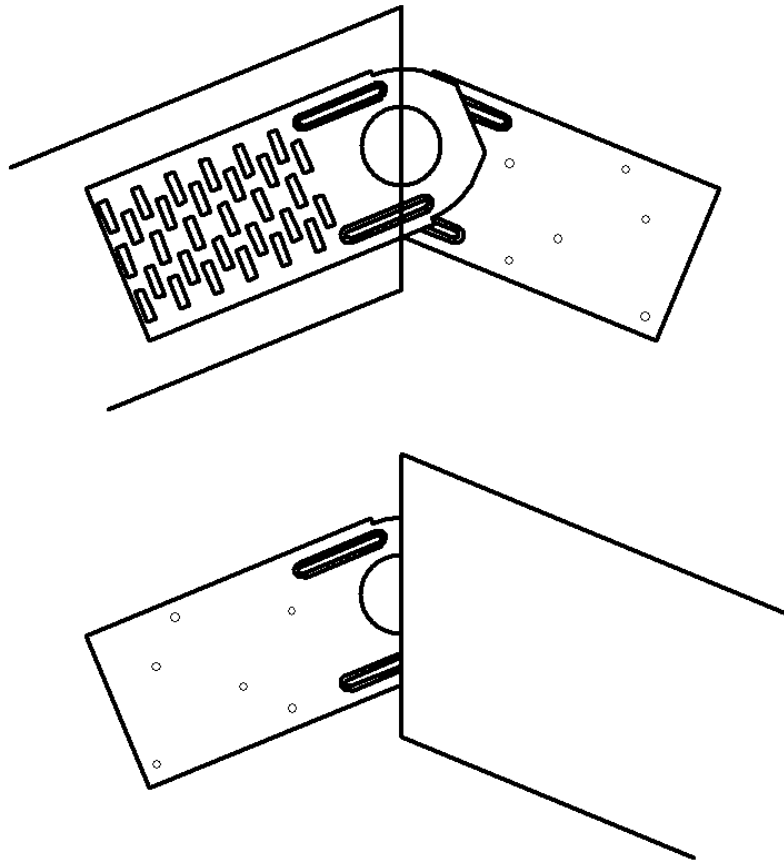
Notice how simply the top chords folds down for shipment, and how the top chords for the next truss can be pre-spliced in the straight position on the same roller pass as the full truss, as shown in Figure 2 above.

The only required field connection is the MTHNH18 hinge plate at the peak. Just fold up the top chords and connect the peak with the MTHNH18 plates already set in place. Just add nails.



*Figure 3*

The MTHNH18 hinge plate is “pressed” into one top chord on each face of the peak and when the top chords are in place, the framer nails the MTHNH18 to the top chords through the six nail holes provided on each face of the truss for a total of twelve nails, and that is it!



*Figure 4*

Hinged trusses are the ultimate in over-height trusses, less pieces for a faster erection.

A single hinge truss can replace four separate components (base truss, cap truss and two scabs) that have to be shipped and then assembled at the jobsite, and it can drastically reduce the amount of bracing and connections required to put them in place. Hinge plates are the perfect solution for both the component manufacturer and the framer. Installation is made easy because you have no loose parts, no extra trusses to build or handle, and no worries about oversized loads on high-pitched trusses.

For additional information, or to learn more about how to implement this at your company's location, please contact MiTek Engineering or MiTek R&D.