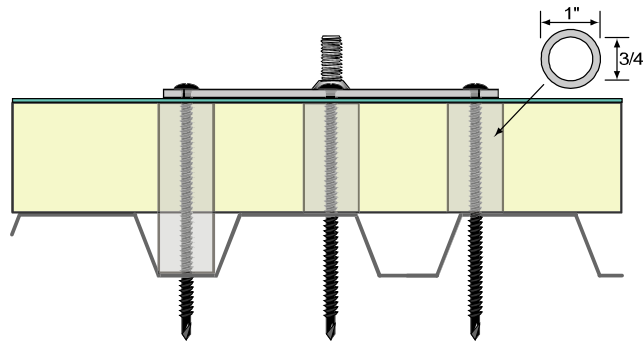


Use of Ferrules with Ecofasten Base plate

1. Determine the thickness of the insulation present on the project. If the insulation is thicker than $\frac{1}{2}$ " (12.7mm) then it is the recommendation of EcoFasten Solar to install ferrules.
2. Ferrules are to be placed at each of the four corners of the plate, and serve to transfer the load from the plate directly to the deck without compressing the insulation. Ferrule material is one inch diameter aluminum tubing with a $\frac{1}{8}$ " thick wall. This material is supplied by Ecofasten Solar and may be purchased either along with the system or at any time thereafter.
3. Position the base, and using a marker appropriate to the roofing material mark the position of the sides of the plate as well as the center of each of the four corners.



4. Using a one inch diameter spade bit, drill through the insulation down to the roof deck. Place the ferrule in to the resulting hole and mark it with ink at the height of the membrane. It is the recommendation of Ecofasten Solar that all ferrules are cut in the field due to variations in both roof deck height and tapered insulation that may be present. As shown in the above diagram, corrugated type roof decks pose a unique challenge and the length of the ferrule will depend entirely on where the plate crosses the channels.
5. Once the four ferrules are in place, mount the base on top of them. The remaining four fastener holes will still be utilized, and will rely on the support of the corners to prevent compressing the insulation.
6. In the event that the roof deck is structural concrete or similar, Ecofasten Solar recommends that the contractor have a field representative from a fastener company perform a pull-test on their roof deck and recommend an appropriate fastener.

