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1. Tools Suggested

Set of sheet metal snips (Red and Green handles)

Sheet metal shears

Sheet metal Hammer

Power Drill (3/8")

Various drill bits and driver bits

Clamps

Tape Measure

Level

Ladders

2. Safety Precautions

This task should be performed in accordance with all pertinent regulations and safe work practices. Ladders are necessary and some work will be performed at a height where there is a considerable falling hazard. It is important to take appropriate safety precautions according to the hazards that are present which are:

- Working with sharp material
- Working with power tools
- Working near electricity
- Working from heights and on ladders, scaffolding or man-lifts
- Lifting hazards
- Working with products such as caulking and insulation

Personal Protective Equipment Required:

- Safety glasses
- Steel toed boots
- Coveralls to protect from insulation
- Respiratory protection for insulation

3. Base Preparation

- 3.1) Place **Base Flashing** on the foundation and notch it so that it is continuous around all corners, ensure that you have a minimum 2" overlap on the end joins (see below).



- 3.2) Place a piece of **Bottom Channel** flush to an edge and cut to the correct length and notch back leg 3 ½" on one piece to overlap on the corners (see below).



- 3.3) In order to make the **Bottom Channels** and the **Base Flashing** square, place the **Base Flashing** and the **Bottom Channel** tight to the two adjacent sides of the foundation (steel or concrete). Then measure across the end from the tight sides and move the **Base Flashing** and **Bottom Channel** to the proper dimension and clamp it. When all sides and ends are parallel and clamped, verify that the whole structure is square by measuring from corner to corner diagonally to ensure that the measurement is the same, ensuring that the base is square, if possible (see below).



- 3.4) Measure where each panel rib will be placed according to the layout print provided to ensure that the screws will not interfere with the panel ribs and then mark their location on the Bottom Channel. Notch the front face of the Bottom Channel every $\frac{1}{2}$ " on both sides of the mark (see below).



4. Panel Layout and Assembly

- 4.1) Drill holes through the **Bottom Channel** and **Base Flashing** for either Zamac pins (concrete) or for #14 screws (metal skid base). Then proceed to fasten the **Base Flashing** and **Bottom Channel** with what is required for the base using your pre-drilled holes.



- 4.2) Start with placing panel #1 as shown on drawing. When placing panels remember the Big End always goes to the right when standing outside, facing the building. Fasten panel #1 to the **Bottom Channel** starting with a single #8 screw to the far left on the low profile. Level the panel and then place another #8 screw into the far right low profile. Continue with next panel using a single #8 screw in far left low profile and then clamp the tops of the panels ensuring that the outside faces are flush. Level both of the panels again and repeat the previous steps for panel #1 and screw ribs together keeping screws close to the face of the panels (see below).



- 4.3) Once two panels are placed and tacked together, then with the use of a level, ensure the panels are made square to the base and attached firmly. This will ensure that the building is square (see below). Once you are sure that the panels are square, and then proceed to place four #8 screws per panel along the bottom outside edge of the panels through the **Bottom Channel**.



- 4.4) When you come to a man door, place the panels flush at the top and continue placing the panels around the entire rough opening. Measure bottom of the rough opening, to ensure that the panels before and after the opening are the correct distance, 38" for a single door and 74" for a double. Once all the wall panels have been secured, install all the **Headers**.



5. Roof Preparation

- 5.1) Proceed with the placement of your **Top Channel** on the side walls only. Place your **Top Channel** on one of the side walls and push tight to the corner and butt the next piece. Fasten the **Top Channel** by placing #8 screws through the **Top Channel** and front of the wall panel in the high profiles (see below).



- 5.2) Place the **Eave Drip** on the top of the **Top Channel** ensuring your joints are offset by a minimum of 3 feet. Fasten the **Eave Drip** with #8 screws starting on the back face, at the end closest to the beginning of the wall, then moving to the end of the first piece of **Top Channel**, then to the end of the **Eaves Drip** and then back to the join in the **Top Channel** to ensure a straight wall. Finish by screwing next to every rib and then down through the top near the face of the panel (see below).



- 5.3) If the building is pre painted or galvalume with eaves trough then add the **Eaves Trough Support** and **Eaves Trough** (if required) to the top of the **Eave Drip**. If the building is galvanized and does not have eaves trough then the **Eaves Trough Support** is not required. Just tack the **Eaves trough Support** down through the top with just a few screws and in the front into every (see below).



- 5.4) Now place the **Top Channel** on your gable end walls and fasten them the same way as the side walls. Notch ends back 3.2" at the corners. Notch front, back and bend down at peak. Fasten in the front at every high profile and in back at every rib.



- 5.5) Next will be the assembly and installation of your sway bracing. This is found only on gable buildings longer than 10'. You will have two pieces, the sway brace and the upright to be connected to it. Then place it on top of the **Eave Drip** in the spot indicated on your building drawing clamp it to the wall and fasten to the building using the 3/8" bolts included in the package.



- 5.6) If the **ridge** needs assembly like the **Two Piece Ridge** for larger buildings assemble it and fasten together with # 10 screws with joints to be staggered. Notched pieces of different lengths go together or on each end.



- 5.7) Now attach the ridge to the **Top Channel** of the gable wall at the peak using # 8 screws on each side of the **ridge** into the **Top Channel**. The **ridge** should be field notched at the ends and for partition walls so it will sit on the **Top Channel**.

6. Roof Installation

- 6.1) To begin roof panel installation, start with the special **two small end starter panel (2SE)** as shown on print. Keep the first panel flush with the outside edge of the gable wall. Measure 1" overhang to bottom of the panel and screw in the outside corner into the eaves drip to act as a pivot point. Install 6 panels screwing panels together but not to eaves drip. Measure 1" of overhang on bottom of panel after 10' then fasten down panels to the wall and ridge. Repeat until roof panels are complete. **Insulation Ribs** must be installed between the roof panel joints as each panel is added on. Start the roof panel installation at one end wall and continue along toward the opposite end installing panels equally on both sides of the **ridge**. Roof panels are fastened to the **ridge** member using # 10 screws staggered every 4" o/c through the roof panel and the **ridge**. Roof panels are fastened to the **Eave Drip** with # 10 screws every 4" through the roof panels and **Eave Drip** (also through the **Eaves Trough Support** and **Eaves Trough** if included).



- 6.2) Next install the **Roof Flashing** and nameplate to install the nameplate the Roof flashing needs to be notched. Then install the **Ridge Cap**.



- 6.3) Ice Rake installation (optional).
Here are a few samples of buildings that have Ice Rakes and **Eaves Trough**.



7. Insulation, Vapor Barrier and Liner Installation

- 7.1) Start by placing insulation in the building walls starting with one end of the wall and working your way around. Try to make as little cut joints as possible. Now install your vapor barrier starting at one end of the wall and fastening so that it falls flush with the floor. Tack your vapor barrier down by using pieces of your cut off material, and screw them into the side of your ribs or on the ribs near the top of the wall.



- 7.2) Install your **liner corner** as indicated using a #8 screw on each side of the **liner corner** at the **Bottom Channel** and the **Top Channel**. This can also be used to help secure the vapor barrier.



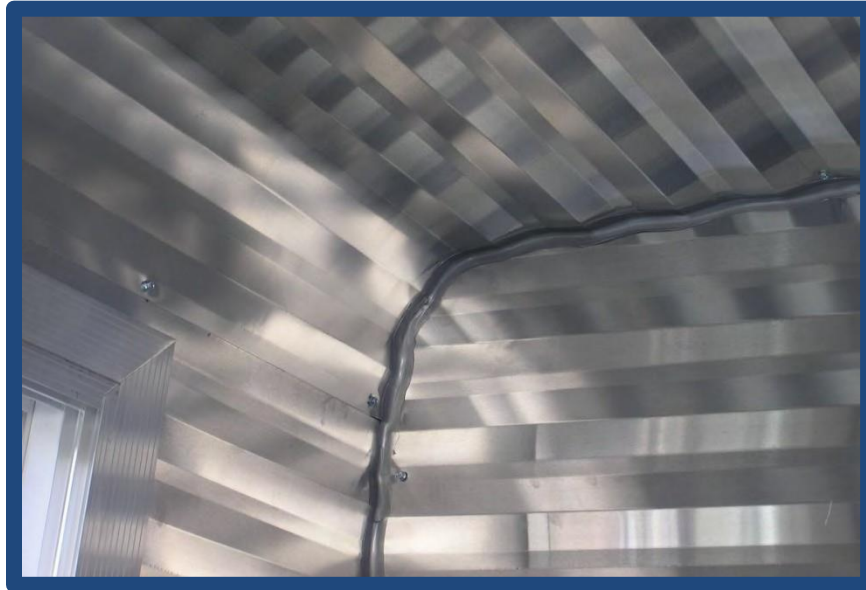
- 7.3) Start lining the gable end walls at the bottom corner and measure out any cuts needed working your way up to the peak. Install the insulation channel. Then start on the side walls in the bottom corner and start working your way up the wall. When you are close to the top of the wall stop lining until the entire roof insulation is done. Use #8 screws and place them on each rib on every second profile starting at very bottom flat profile up to the 4th flat profile from the top.



- 7.4) Insulate the roof and install vapor barrier.



- 7.5) After the roof is insulated and the vapor barrier is in place, line the roof starting from the liner on the top of the side wall and curve the liner in and keep working your way up to the **ridge**. Do the same on the other side and finish with putting the final liner piece on the center. Covering the inactive **ridge** or up to the edge of the vent opening of an active **ridge**.



- 7.6) Each Liner Seam is then caulked (corners) and also along base of wall required to ensure building is sealed.

