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IMPORTANT NOTES

Water-Resistive Barriers

When considering the use of house wrap behind siding products, Royal Group recommends first and foremost, that installers review local building code requirements. Keep in mind that additional measures may provide better protection against water intrusion than the minimum requirements of the building code.

Though The Royal Group does not require the use of house wrap behind Haven, it is important to note that, Haven Insulated Siding is designed as an exterior cladding, not a water-resistive barrier. It is designed to allow the material underneath it to breathe; therefore, it is not a watertight covering. As best practice, a water-resistive barrier integrated with code-compliant flashing, must be applied prior to the Haven Insulated Siding installation.

Storage and transportation

When transporting Haven Insulated Siding to a job site, make certain to keep the cartons flat and supported along their entire length. At the job site, take the following precautions when storing the product:

- Store the cartons on a flat surface and support the entire length of the cartons.
- Keep the cartons dry.
- Do not store the cartons in stacks more than 8 cartons high.
- Do not store the cartons in any location where temperatures may exceed 130° F (e.g., on blacktop pavement during unusually hot weather or under dark tarps or plastic wraps without air circulation).

Tools and Equipment

- Hammer
- Tape Measure
- Chalkline
- Circular Saw (paneling blade reversed)
- Snips
- Square
- Utility Knife
- Pencil
- Level
- Nail Slot Punch
- Snap Lock Punch
- Safety Glasses

Tools, such as saber saws, rotary tools, etc. may also be useful when cutting panels to fit around obstacles.

Fastener Choices

When choosing a fastener for Haven Insulated Siding products, Royal Group recommends that first, you check with local building code officials for possible requirements. In lieu of special code requirements, we recommend the following;

Nails:

- Nails should be a minimum of 2 ½" in length and able to penetrate not less than ¾" into framing or furring.
- Nail is to be made of galvanized steel or other corrosion resistant material and should have a head of at least 5/16" in diameter and a shank of ?".

Screws:

- Screws must not inhibit the expansion and contraction of the panel(s). Screws should be able to penetrate not less than ¾" into framing or furring and should be:
 - Size #8, truss head or pan head.
 - Corrosion-resistant, self-tapping sheet metal type.

Staples:

- Staples must not inhibit the expansion and contraction of the panel(s) and must be:
 - not less than 16 gauge semi-flattened to an elliptical cross-section.
 - a minimum of 7/16" crown, 1 ¾" in length and able to penetrate not less than ¾" into framing or furring.

Wall Preparation

New Construction

- Haven Insulated must be installed over rigid sheathing. Consult local building codes for specific sheathing requirements. This product should never be applied directly to studs without sheathing.

Residing

- It is important to nail down loose boards of existing siding, and replace any rotten ones.
- Scrape off loose caulk and re-caulk around doors, windows and other areas to resist moisture penetration.

Masonry Walls

- Apply minimum 1"X3" furring strips vertically at 12" to 16".
- Furring should be installed along all trim areas such as windows, doors under overhangs, corners, etc., well as along the bottom of the walls.
- To achieve the most solid feel possible, fill the areas between the furring strips with foam board.

Flashing

A weather resistant material should be applied around windows, doors, inside and outside corners and the intersection of walls and roofing before the installation of Haven Insulated Siding.

INSTALLING ACCESSORIES:

Striking a Chalk Line

To ensure proper Haven Insulated Siding installation, it is important to create a straight reference line for the positioning of the starter strip.

- Determine the lowest corner of the walls to be sided. Measure up to establish the point that will represent the top of the starter strip.
- Using a level, strike a chalk line from this point, around all walls to be sided. (In some situations, it may be possible to measure down from overhangs equally, to establish this line.)

Starter Strip

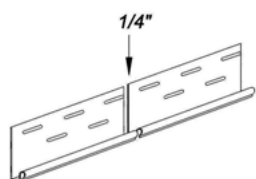


Figure 1.

- Using the chalk line as a guide, align the top of the starter strip on the line and fasten every 8"-12". Allow space for corner post, J channels, etc.
- Fasten in the center of the nail slots using the lower slots when ever possible. Do not nail tight.
- Leave 1/4" space in between pieces of starter strip (Fig.1).

In situations where it is necessary to start Haven in J channel, Drill 1/4" diameter weep holes no more than 24" apart.

Outside and Inside Corners

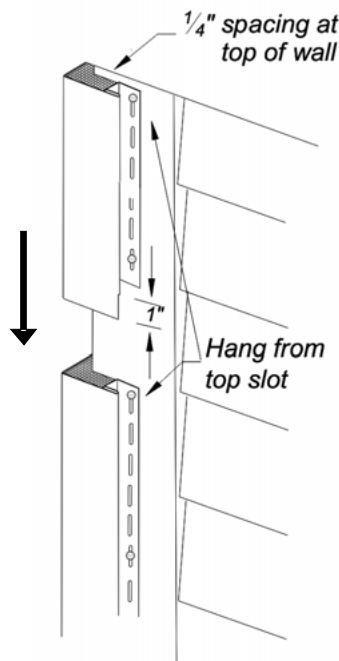


Figure 2.

- Make sure posts are plumb. Strike a chalk line if necessary.
- Place the corner post so that there is a 1/4" gap between the post and any overhang or eave. The corner post should continue 3/4" past the bottom of the starter strip. Position fasteners at the top of the upper slots on both sides of the post. Hang the post with these two fasteners. Continue to secure the post by placing fasteners in the center of slots at 8" to 12" intervals. Leave 1/32" gap between the fastener and the post (Fig. 3). Trim off the nail hem area that will be exposed below the siding.
- Allow 3/8" gap at the bottom if the post is to be placed over concrete, decking, etc.
- If more than one length of corner post is required, remove 1" from the nail hem and receiving channel of the upper post and overlap the post by 3/4" to allow for expansion (Fig. 2).

Note: Alternative methods of using J channels in place of inside corner posts is acceptable providing the corner is flashed properly to inhibit moisture intrusion.

Trimming Around Windows and Doors

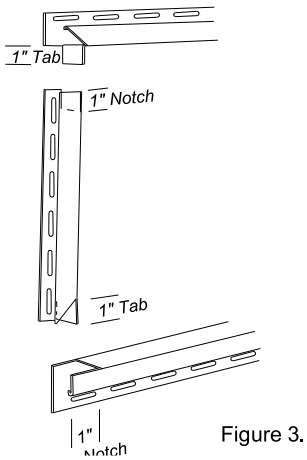


Figure 3.

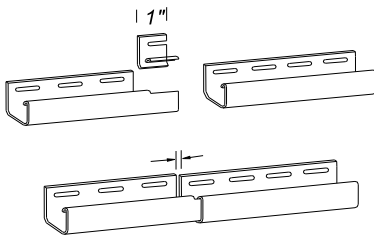


Figure 4.

- Cut and install J channels as shown (Fig. 3).
- Install J channels fastening every 8" to 12". Hang the side channels by locating a fastener at the top upper nail slot and center slot fastening the remainder of the channel.

J Channel over Roof Lines

Install channel over flashing keeping the channel approximately 1" from the roof line. Overlap the ends of the channel if more than one length is required (Fig. 4).

- Extend the channel beyond the edge of the roof to ensure proper water runoff.

INSTALLING HORIZONTAL PANELS:

Cutting Haven Insulated Siding is most easily done with a circular saw using a paneling blade reversed. Saber saws, rotary saws, snips, etc. can also be used.

First Panel

Install the first panel by engaging the bottom of the panel into the starter strip. Adjust the panel to leave approximately a $\frac{1}{4}$ " gap in the corner in temperatures over 5°C or a $\frac{3}{8}$ " gap in temperatures below 5°C. Fasten the panel in the center of the nail slots, leaving $\frac{1}{32}$ " between the fastener and the panel to allow the panel to expand and contract. Space fasteners at 16" maximum.

NOTE: Always overlap seams away from entrances and away from the greatest traffic.

Seaming Panels

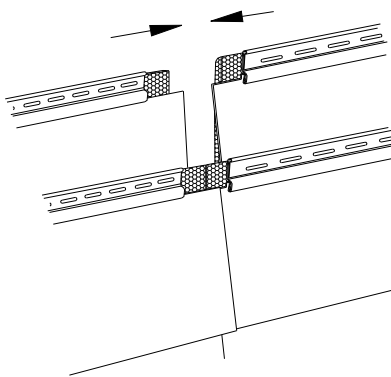


Figure 1.

- The foam is recessed and incorporates a pocket on Haven Insulated Siding for the purpose of proper seaming. To seam two panels together, slip the face of one panel between the foam and the face of the adjoining panel. Slide panels together until foam to foam contact is achieved when installing above 5°C, $\frac{1}{4}$ " apart under 5°C. **Don't** allow more than $\frac{1}{4}$ " space between ends of foam (Fig. 5).
- Seaming is most easily achieved by using factory cut ends whenever possible. If a field lap is necessary, cut back the foam approximately $\frac{3}{4}$ " on the field cut, fabricate the panel end notches, and always use a factory notch as the overlapping panel, placing the field cut end into the factory end.

Continue Course Installation

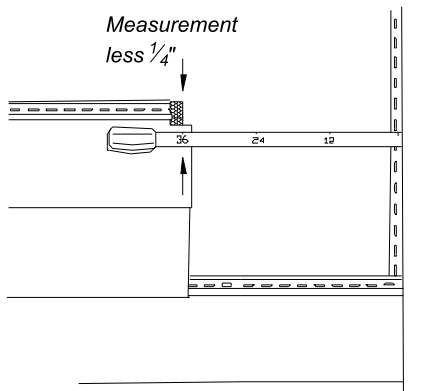


Figure 2.

Continue installing panels fastening no more than 16" apart. When determining the length of the final panel of a course, measure from end of foam to corner, J channel, etc., less $\frac{1}{4}$ " or $\frac{3}{8}$ " depending upon the temperature. Transfer this measurement to the panel being careful to measure the foam, not the face of the panel. This will result in the correct panel length incorporating the gap for expansion (Fig. 6). Install remaining courses staggering laps so that no two laps are vertically aligned, unless separated by at least three courses.

Installing around windows, etc.

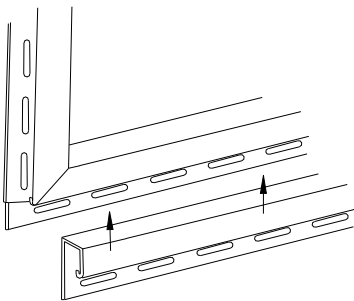


Figure 3.

- Measure and mark the panel to be cut for under the window. Add approximately $\frac{1}{4}$ " to both sides and bottom of the cut to allow for panel expansion.
- When installing Haven Insulated Siding panels under windows, use a snap lock punch to secure the panel into the J channel. Depending upon where the window cut falls on the panel, you may need to install universal J or shim out a piece of finish trim and install into the 1-1/8" under the window. Snap lock the cut edge into this trim (Fig. 7).
- Never place a seam directly below or above a window or door opening.

Top Course Installation

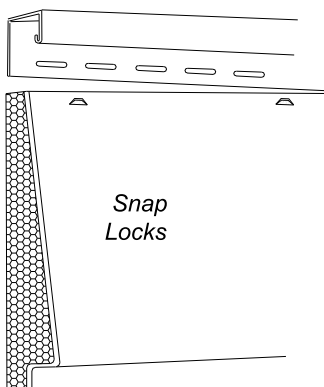


Figure 4.

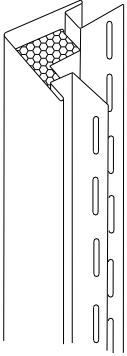
- **Use a crimping or Snap Lock Tool.** If this method is used, make certain that the panel "snaps" into the receiving J. Depending upon where the rip cut falls the receiver may need to be 1-? "J or ? " J. In some cases, a small strip, approx. 1- $\frac{1}{2}$ " wide X $\frac{1}{8}$ " to $\frac{1}{4}$ " thick, placed in the J prior to the installation of the panel, is needed to assure positive engagement of the crimps (Make certain the panel fits snugly in the receiving channel). Measure from the soffit to the bottom of the top lock on the previous course of siding. Subtract $\frac{1}{4}$ ". Mark and cut the top course panel. Crimp the panel approximately every 6" and install the panel (Fig.8).

HAVEN® BOARD & BATTEN VERTICAL INSTALLATION

INSTALLING ACCESSORIES

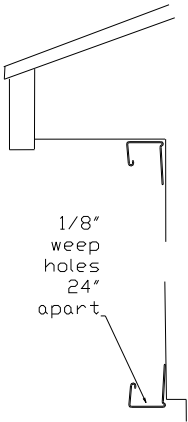
Prepare the walls as you would for any siding installation making certain to properly integrate any necessary flashing, etc. This product must be installed over a solid nailable surface or furring strips installed horizontally at a maximum of 12" on center. Follow all basic vinyl siding installation guidelines.

Haven™ Outside and Inside Corner Posts



Leave a 1/4" gap between the top of the post and the eave or soffit. Position a nail at the top of the uppermost nail slot on both sides of the post, leaving a 1/32" between the nail heads and the post. Place all other nails in the center of the slots at 8" to 12" intervals. Make certain the post is straight and plumb.

Top and Bottom Receivers



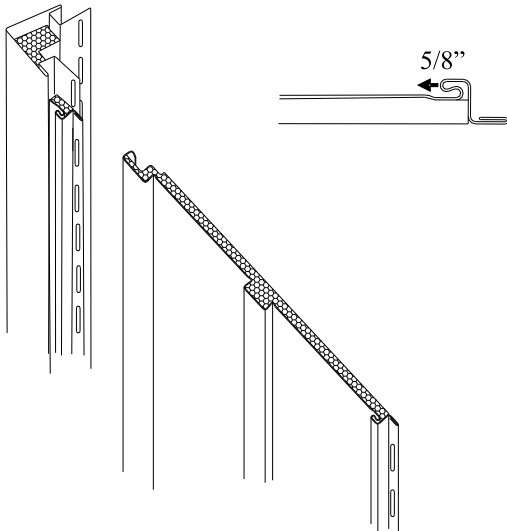
Install J channel receivers at the top and bottom. Remember to drill 1/8" diameter weep holes in the bottom receiver no more than 24" apart. Fasten channels every 8" to 12" in the center of the nail slots. All vinyl should be fastened securely but not tightly. Leave 1/4" gaps at corner posts, etc. Where lengths adjoin, trim the nailing flange 1" and overlap 1/2".

J Channel around Windows and Doors

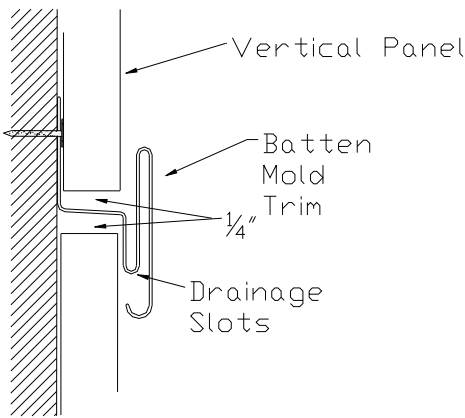
Install 1-1/8" J channel as you would other vinyl J channels nailing every 8" to 12". Make sure you create water diversion tabs on both ends of the top channels.

HAVEN® BOARD AND BATTEN INSTALLATION, *continued*

INSTALLING PANELS

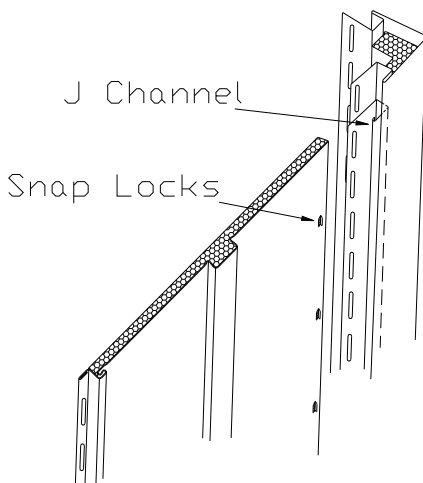


Create a starter strip by measuring a minimum of 5/8" from the lock of a panel, removing the lock and installing it in the pocket of the corner post as shown. This will allow enough space for the first full panel to be engaged into the starter. Save the remainder of the starter piece to possibly finish off at the other end of the wall. A Haven horizontal Siding® starter strip may also be used. If so, make sure to leave enough room in the pocket of the corner post to engage the first panel.



Install panels leaving 1/4" gap in the top receiver and 3/8" gap in the bottom receiver. To do this, hang each panel by placing the first fastener in the top of an upper nail slot and the remainder of the fasteners in the center of nail slots at a maximum of 12" on center. Be sure to leave a 1/32" gap between the nail head and the panel to allow for expansion and contraction.

If more than one course of vertical siding is required to cover the height of the home, or transitioning from one siding product to another, install batten mold over the top of the first course as shown. Strike a chalk line 2-1/4" above the top of the first course of siding. Position the top edge of the batten mold along the chalk line and fasten every 8" to 12".



When installing around windows or doors, use a snap lock tool to secure the cut edge of the panel into the J channel. Depending upon where the cut falls on the panel, it may be necessary to install a piece of universal J channel inside the 1-1/8" channel. The cut edge of the panel should be snug in the channel to be secure. Installation of a shim may be needed. Similarly, when installing the final piece of siding, secure the panel into a piece of J channel using a snap lock tool as shown.

WINDOW LINEAL INSTALLATION

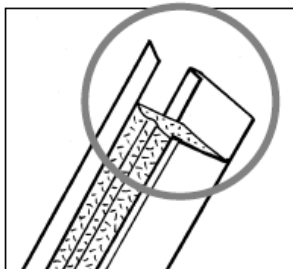
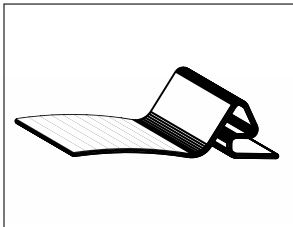


Figure 1

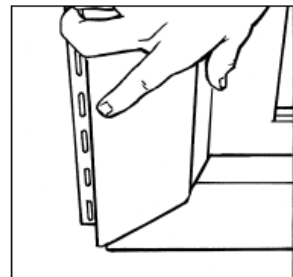


Figure 2

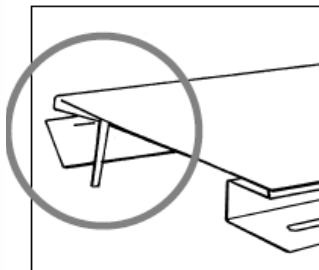


Figure 3

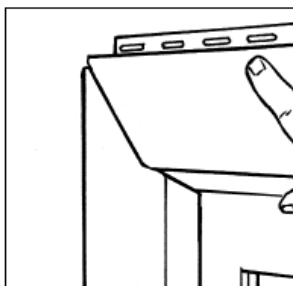


Figure 4

LINEAL STARTER STRIP

1. Measure the width and height of the window. Subtract 1/8" from the measurements. Cut and install lineal starter strip, nailing loosely every 8" to 12".

BOTTOM LINEAL

1. Measure the width of the window. Add 7" for 3 1/2" lineals and 10" for 5" lineals.
2. Measure and cut a 7/8" notch off the window J receiver on both ends of the lineal. Cut the same 7/8" notch out of the J pocket of the lineal, again on both ends. Cut back the foam to these notches. (figure 1,)
3. Snap lineal onto bottom of window and tack temporarily into place.

SIDE LINEALS

1. Measure the height of the window and, as with the bottom lineal, add 7" for 3 1/2" lineals and 10" for 5" lineals
2. Make the same 7/8" notches to the top of the side lineal as are shown in figure 1. Cut back the foam to the notch.
3. On the opposite end, measure back 3 1/2" on the inside or window side and make a mark. Using snips, cut a 45° angle from the outside corner to your mark. (figure 2.)
4. Make a 7/8" notch in the J pocket.
5. Cut back the foam to the inside of the angle.
6. Install the side lineal working the angle over the bottom lineal.
7. Nail loosely, every 8" TO 12"
8. Repeat for other side.

TOP LINEAL

1. Using the width measurement, add the appropriate amount and cut to length.
2. Measure back 3 1/2" on the window side and make a mark. Using snips, cut a 45° angle from the outside corner to the mark.
3. Cut a 3/4" notch inside the pocket, as you would with j channel, to form a rain tab and bend it down. Repeat this process on the other end. Cut the foam back to the insides of the angles. (figure 3.)
4. Install the top lineal placing the angles over the side lineals. Nail loosely every 8" TO 12". (figure 4.)

Finish by nailing bottom lineal loosely, every 8" TO 12".