
SECTION 6 — Preparing for Horizontal Siding

Preparing Wall Surfaces

Sheathings

In new construction, apply sheathing first, then nail accessories over it.

The application method you choose determines the width of the recess opening required. For example, use:

- 1/2" opening when applying accessories over sheathing and installing siding with a panel projection of 1/2" or less.
- 3/4" opening when applying accessories over sheathing and installing siding with a panel projection of 3/4" or less.
- 1-1/4" opening when applying accessories first and using sheathing that's less than 3/4" thick for sidings with a panel projection of 1/2" or less. For sidings with a panel projection of 5/8" or 3/4", use a sheathing that is 1/2" thick or less.

New construction

Make sure all studs are straight and true. Correct any bowed studs.

NOTE: Vinyl siding must be applied over a rigid sheathing that provides a smooth, flat surface or an underlayment (such as wood, wood composition, rigid foam or fiber sheathing) that is no more than 1" thick. Vinyl siding cannot be applied directly to studs. See the instructions on page 29 for installation over continuous insulation systems thicker than 1".

If you're planning to use a conventional house wrap or building felt, apply according to the manufacturer's recommendations. In all cases, however, install the products so they are secured firmly to the substrate so that they provide a smooth, even surface for the final siding installation. Make sure sheathing is fastened securely to studs.

Vinyl siding is an exterior cladding; it is not a complete weather resistant barrier. Before applying siding, make certain the substrate is watertight. In order to be protected from precipitation, the substrate may need to be properly flashed around areas such as windows, doors, other openings and corners so as to shed water to the exterior. See page 45 for proper flashing around windows. The siding alone is not meant to be a watertight barrier.

Vinyl siding cannot be installed on a radius wall.

Continuous foam insulation systems (SIPs)

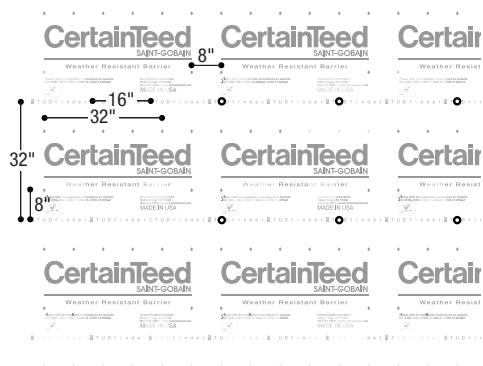
Continuous foam insulation systems (e.g. rigid insulation, structural insulation products) thicker than 1" create a condition where CertainTeed vinyl siding and polymer shakes cannot be properly attached to the existing framing members, steel studs, or structural sheathing.

The easiest way to meet the fastening requirements for CertainTeed siding is to install 3/4" structural sheathing (such as OSB or plywood) over the continuous foam insulation. However, the wall assembly must be designed in such a way that the structural fastening surface that is re-established on the exterior of the insulating products is sufficient to meet the requirements of ICC-ES Evaluation Report ESR-1066 for vinyl siding or ICC-ES Evaluation Report ESR-3085 for polymer shakes.

CertainTeed does not provide instructions for wall design or assembly that specifically relates to the fastening requirements for re-establishing a structural fastening surface for CertainTeed vinyl and polymer siding. However, FastenMaster® provides two documents to assist in successfully re-establishing a structural fastening system on the exterior of a continuous foam insulation system:

- Technical Evaluation Report (TER No. 1009-01): Use of FastenMaster HeadLok™ Fasteners to Attach Cladding and/or Furring to Wood Framing through Foam Sheathing
- Technical Bulletin: Attaching Exterior Wall Covering Assemblies with Foam Sheathing to Steel Wall Framing

The Fasten Master reports must be used in combination with ICC-ES Evaluation Report ESR-1066 for vinyl siding or ICC-ES Evaluation Report ESR-3085 for polymer shakes to determine attachment requirements. In addition, all the installation methods included in this manual must be met.



Fastening CertaWrap™ Weather Resistant Barrier

To secure the Weather-Resistant Barrier, use the appropriate recommended fasteners and fastening schedule for your application.

Wood-based sheathing

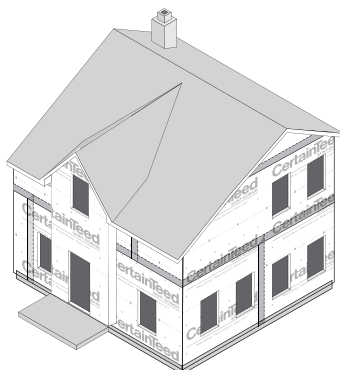
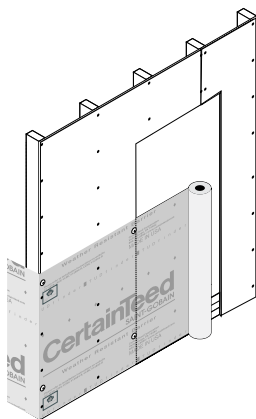
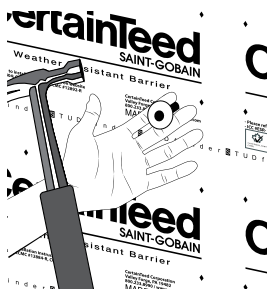
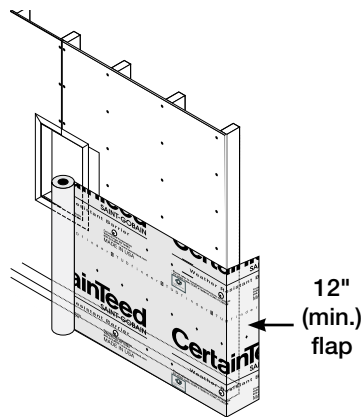
When attaching CertaWrap Weather-Resistant Barrier on wood-based sheathing, such as 7/16" OSB or 15/32" plywood, apply plastic-capped staples or plastic-capped nails every 32" vertically and horizontally.

Open-stud construction or non-structural sheathing

When attaching CertaWrap Weather-Resistant Barrier on open studs or non-structural sheathing, apply plastic-capped staples or plastic-capped nails long enough to penetrate the stud a minimum of 5/8" every 32" vertically and horizontally.

Steel framing

When installing CertaWrap Weather-Resistant Barrier over steel framing, use screws with minimum 1" diameter washers every 32" vertically and horizontally.



STUDfinder™ installation instructions

1. The STUDfinder Installation System combines precisely engineered fastening locations with graphics that help ensure quick, accurate, and secure installation. Install CertaWrap horizontally to exterior walls prior to the application of exterior cladding. Vertically position the CertaWrap roll at the corner of the structure with the printed side out.
2. Locate the first stud and verify that it is plumb. Align the first stud with the nearest vertical STUDfinder line, allowing for a minimum 12" flap to wrap the corner for attachment to the adjoining wall. Extend the bottom edge of the CertaWrap 2"-4" over the sill plate. Apply plastic-capped staples or plastic-capped nails every 32" vertically along the first stud to secure the Weather-Resistant Barrier into position.
3. Unroll the CertaWrap along the exterior wall. Wrap CertaWrap completely around the building, covering window and door openings, plates, sills and corners.
4. To secure the Weather-Resistant Barrier, use the fasteners and fastening schedule that is appropriate for your application. The STUDfinder marks will quickly guide you to your desired fastening location without the need for chalk lines. Each letter is spaced 1.6" apart, and each series spans 16". To achieve 32" spacing between fasteners, first locate the letter that the first row of fasteners covers. The second repeat of that letter is at 32".
5. Pull the CertaWrap snug and fasten it to the studs or sheathing and to the top and bottom plates.
6. When starting a new roll in the middle of a wall, overlap vertical and horizontal laps in the field a minimum of 6". When starting a new roll at an inside or outside corner, overlap vertical and horizontal seams a minimum of 12". All vertical and horizontal seams are to be installed in a weatherboard fashion. Lap CertaWrap over all existing flashings (e.g. z-flashing, roof-to-wall flashing, drip cap).
7. Flash or tape all vertical and horizontal seams and penetrations.

Drop-in foam backer boards

Some drop-in foam backers can restrict the movement of vinyl siding. Therefore, CertainTeed vinyl siding may not be applied over any drop-in foam backer other than a contoured drop-in foam backer designed specifically for each profile.

IMPORTANT: CertainTeed will not accept any responsibility or liability in the event the drop-in foam backer restricts the movement of the vinyl. The use, fit, and performance of the siding backer board is the responsibility of the installer and the backer board manufacturer.

NOTE: Contoured drop-in foam backer boards are not a substitute for rigid foam sheathing.

Home improvement projects

You can prepare your current siding surface to receive vinyl siding in one of three ways:

Strip off old siding and level the wall. If felt paper covers the wall, you have two alternatives: either strip it off completely or staple or nail it to create a smooth surface. If there is no solid sheathing under the old siding, you must apply it as described in the instructions for New Construction.

Apply rigid sheathing to existing siding to provide a smooth surface. Nail securely to old siding. Nail evenly to bridge low spots.

NOTE: Failure to establish a smooth, solid surface constitutes misapplication under the terms of the warranty.

Apply vertical furring to old siding to straighten noticeable surface unevenness. (See "Tips for applying wood furring.") Then apply rigid sheathing, following the instructions presented under New Construction.

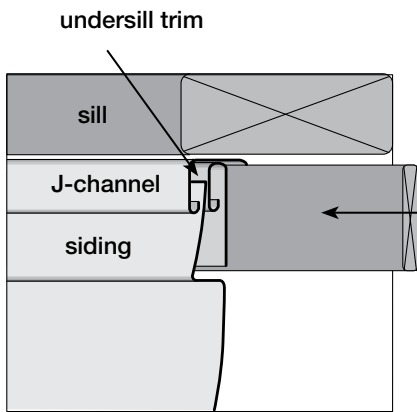
NOTE: For information on installing siding over asbestos and for historic applications, see page 142.

Tips for applying wood furring

If you are working on an older home with noticeably uneven walls, you must correct this condition before proceeding. If not corrected during preparation, this uneven surface will produce a wavy appearance in siding applied over it.

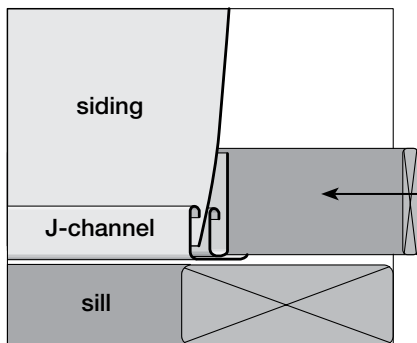
For best results, space horizontal furring strips 12" on center. Do not exceed 16". To correct an uneven wall, use furring strips (and wood shims if necessary) to eliminate low spots.

NOTE: You must apply rigid sheathing over furring.

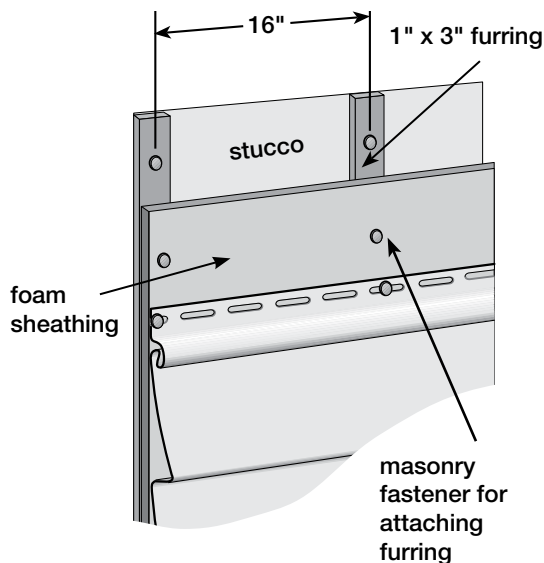


When covering over masonry or bricks, it's better to use 1" x 3" furring. For best thermal performance, install a minimum of 1/4" foam over furring strips.

Furring and/or foam is also used below eaves and windowsills to maintain correct slope angles when siding panels must be cut to a narrower dimension to fit.



Similarly, when panels are cut to fit over doors or windows, furring and/or foam is used to establish the correct slope angle.



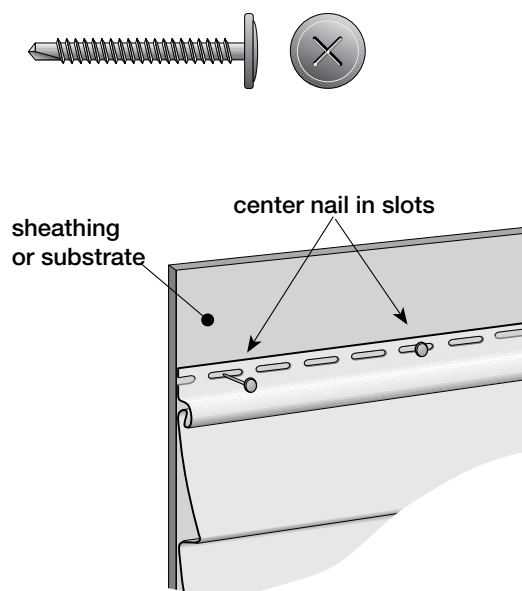
Applying over stucco or masonry

When applying vinyl siding over stucco or masonry, you first have to be sure you're working on an even surface. To create that surface, you may have to knock down high spots where furring strips will be applied. Use caution when chipping off these spots—you don't want to crack or damage the remaining stucco or masonry.

Apply 1" x 3" furring over the stucco or masonry using power-actuated fasteners or other appropriate masonry fasteners. Stucco will not hold fasteners tightly, so be sure nails or screws are anchored securely to studs. Furring strips should be spaced 16" on center.

Applying rigid foam sheathing to furring

Install sheathing according to manufacturer's instructions. Do not apply siding directly to furring strips. For best thermal performance, install a minimum of 1/4" foam over furring strips.



Applying over steel studs

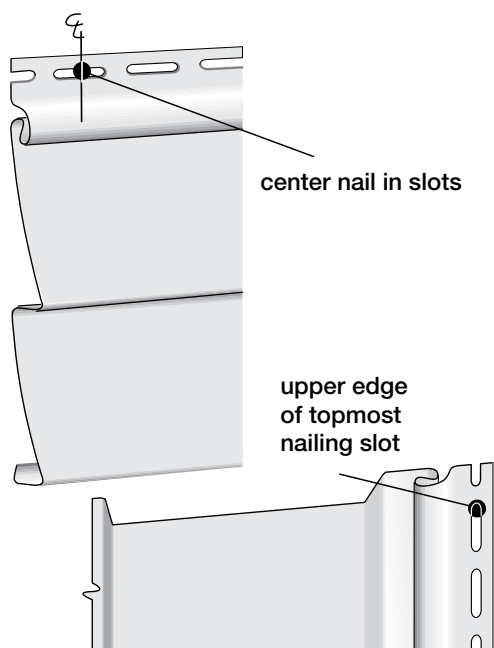
Pre-planning is the key when installing vinyl siding and accessories over steel studs. Pre-planning includes the selection of siding style and the types of accessories. Pre-planning proper stud placement will eliminate many of the problems that could surface once the job has been started, such as at corners, windows, and transitional areas.

Follow the same guidelines as in a wood surface—except for the type of fasteners used. Wall sheathing must be installed over the studs. This will provide a straighter, smoother and more rigid wall surface and help prevent studs from twisting. Siding must be secured into metal studs if the substrate is not a nailable surface such as exterior dry wall, gypsum board, etc.

The application of vinyl siding, soffits and accessories over steel stud framing rather than typical wood framing is straightforward. The main difference is the use of screws to hang components that make up a completed siding job.

Use noncorrosive, self-tapping screws with at least 5/16" diameter head, 1/8" diameter shaft, and at least 1-1/8" long.

Although the fastening method for steel studs differs from wood construction, all other procedures still apply, including fastening in the center of the nail slot and not overtightening the fasteners.



Note: See pages 35-36 for general fastening guidelines

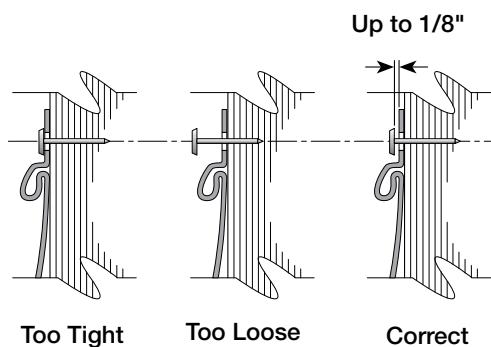
Nailing, Stapling and Other Fastening Methods

If you want to ensure a quality vinyl siding installation, focus your attention on nailing techniques. Unfortunately, a lot of installers don't. They feel nailing is a routine task, something everyone knows how to do. But that's not the case. **At CertainTeed, we analyzed reported installation problems, and we found that more than half of them can be traced back to improper nailing.** So if you want to save yourself lost time and frustration, carefully observe the following guidelines when installing accessories, siding panels, soffit, or porch ceilings.

Lock the panel and begin nailing at the center of the panel, working toward the ends. This helps maintain a level line.

With horizontal accessories and panels, position the nails in the center of the elongated nailing slots to allow for expansion and contraction. Never nail through the panel surface.

With vertical accessories and panels, position the **first nail** at the **upper edge of the topmost nailing slot**. This allows a panel to hang from the nail. Position the remaining nails in the center of the nailing slots. Allow for 1/3 of the total expansion at the top and 2/3 of the total expansion at the bottom.



NOTE: Do not nail too tightly. To permit expansion and contraction, panels should hang freely from nails. This allows the panels to move as the temperature changes. Drive the nails until there is between 1/8" to 1/16" of space between the nail head and the nailing flange.

Drive the nails straight in. Do not angle nails.

Per the ASTM specification for vinyl siding installation (D4756), proper nail penetration is at least 3/4". In most cases, that requires anchoring to studs.

Fastener spacing

Fasteners are typically spaced a maximum of 16" apart. In new construction, fasten to studs on 16" centers. Do not skip studs. Some vinyl siding may be used in 24" on center construction in areas without special wind-load requirements (fasteners spaced a maximum of 24" apart). Check with your local building code official for special requirements and ICC-ES Evaluation Report ESR-1066 for specific wind-load requirements.

Other fastening techniques:

Manual nailing is the most common way of fastening vinyl siding to a wall. That's because it offers greater control, making it easier to learn how to fasten panels securely, but not tightly. You also can use power screwdrivers or pneumatic staplers/nailers to attach vinyl siding to a wall, but you must take the time to develop the proper skills. If you choose to use one of these alternate techniques, follow all the recommendations above for nail positioning and spacing and the recommendations for substrate preparation on pages 28 to 32 for horizontal applications and page 80 for vertical, including Board & Batten. In addition, be sure to observe the following guidelines:

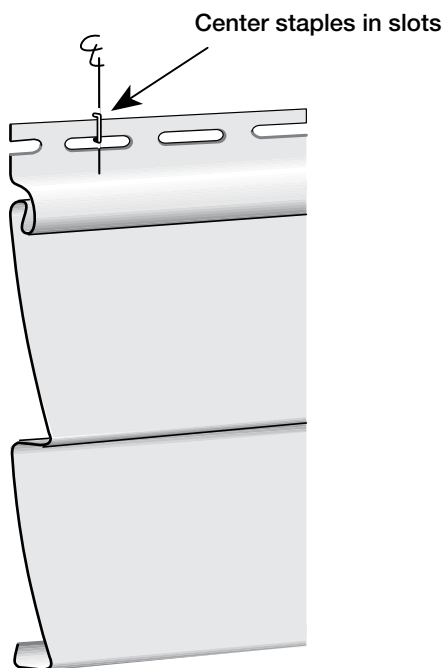
Power screwdrivers

Use noncorrosive, self-tapping truss head screws. Screws must have at least 5/16" diameter head and 1/8" diameter shaft. Screws must be at least 1-1/8" long. If underlayment is less than 3/4" thick and is not considered a nailable surface (for example, foam or exterior grade gypsum), be sure screws are long enough to penetrate at least 3/4" into wood studs or substrate, 1/8" through a steel stud. Be sure screws are **centered in the nail slot**. **Leave 1/16" to 1/8" space between the screw head and the panel nailing flange.**

Pneumatic staplers/nailers

Use corrosion-resistant fasteners only. Fasteners must be centered in the nail slot, no more than 16" on center.

NOTE: Some power staplers/nailers use an attachment that helps position the fastener in the nail slot. If your unit does not have that feature, you must carefully position the fastener by sight.



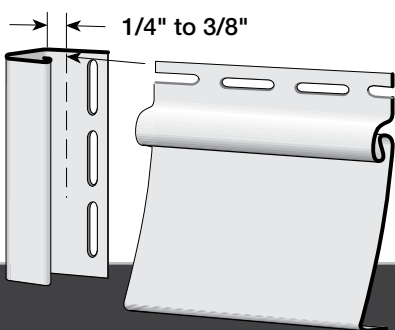
Fasteners must penetrate a nailable surface at least 3/4". Be sure to leave up to 1/16" between the fastener and the panel nailing flange. If you're using a power stapler, drive the staple perpendicular to the nailing slot with one leg of the staple centered in the slot and the other leg above the panel.

NOTE: Check with local building codes to verify fastener requirements for your area.

Nail Spacing and Product Expansion and Contraction

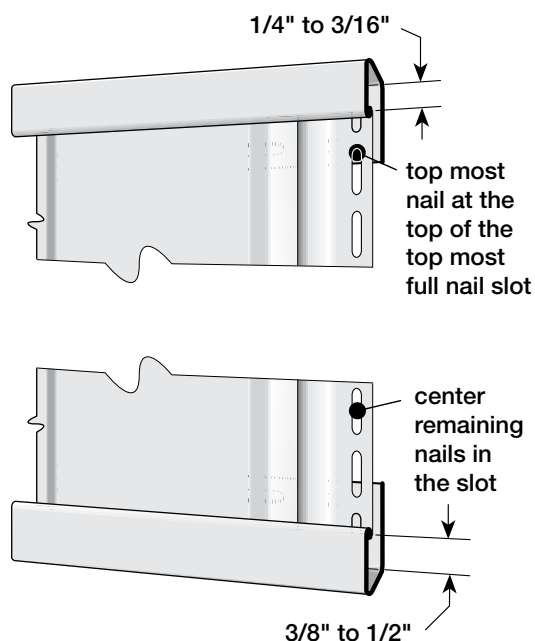
It's normal for vinyl building products to expand and contract with temperature changes. To ensure a successful siding installation, you must allow for this movement during application.

See the following charts for more information.



Product Category	Max. Nail Spacing	Gaps to Accessories		Overlap	
		40°F or Greater	Less than 40° F	40° F or Greater	Less than 40° F
Horizontal Lap Siding (12' 6")	16"-24"*	1/4"	3/8"	1-1/4"	1"
Horizontal Lap Siding (16')	16"-24"*	3/8"	1/2"	1-1/2"	1-1/4"
Horizontal Lap Siding (20')	16"-24"*	3/8"	1/2"	1-1/2"	1-1/4"
Horizontal Lap Siding (25')	16"-24"*	3/8"	1/2"	1-1/2"	1-1/4"

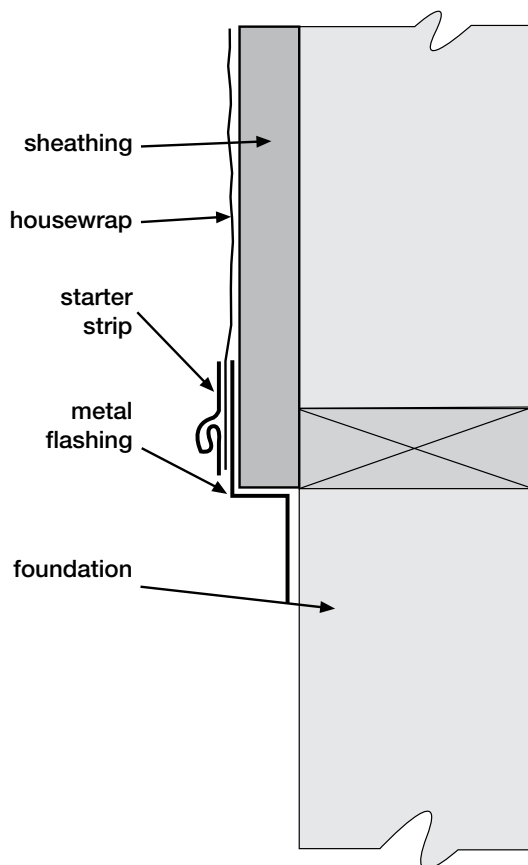
*Depends on profile, fastener and geographic area.



Product Category	Max. Nail Spacing	Gaps to Accessories	
		40°F or Greater	Less than 40° F
Vertical Siding	12"	3/16" top 3/8" bottom	1/4" top 1/2" bottom

Hang off of top nail slot (see page 80 for more details).

Product Category	Max. Nail Spacing	Gaps to Accessories		Overlap		Notes Specific to Product
		40°F or Greater	Less than 40° F	40°F or Greater	Less than 40° F	
Cedar Impressions	Fasten at Delta Indicators	1/4"	3/8"	Use Temp. Marks/ Gauge	Use Temp. Marks/ Gauge	All panels must be center pinned (see page 95 for more details)
Northwoods	16"	1/4"	3/8"	Use Temp. Marks	Use Temp. Marks	All panels must be center pinned (see page 125 for more details)
CedarBoards	16"	1/4"	3/8"	1-1/2" Butt Foam	1-1/2" Butt Foam	
CedarBoards XL	16"	3/8"	1/2"	1-1/4" to 1-3/4"	1-1/2" Butt Foam	



Installing Accessories

Snapping a chalk line

To ensure proper installation, you must establish a straight reference line to guide the positioning of the starter strip and the first course of siding.

If the house is reasonably level, find the lowest point of the old siding (or sheathing if working on new construction). Partially drive a nail at one corner, starter height minus 1/4" above the lowest corner. Attach chalk line. Go to other corner and pull the chalk line taut. Stretch the chalk line from this nail to the opposite corner of the house. Make sure the line is level, using a line level or 4' (minimum) level. Snap chalk line and repeat the procedure around the entire house.

A water level, a long clear plastic tube 90% filled with water, is useful in marking level points around the house and on opposite sides of openings such as doors. Water will always seek a level state, ensuring the markings will always be at the same level.

NOTE: If after establishing a chalk line you find that your starter strip will be positioned below an easily nailed surface, you may have to apply a nailable base.

If you have added sheathing, you may want to bend trim coil to act as flashing and help prevent entry of insects. Bend the coil in a "Z" shape so the top edge of the coil is on the chalk line and the bottom edge extends down over the foundation. (See illustration.)

NOTE: The general guidelines for cutting and nailing vinyl panels and for allowing for expansion and contraction also apply to vinyl accessory items.

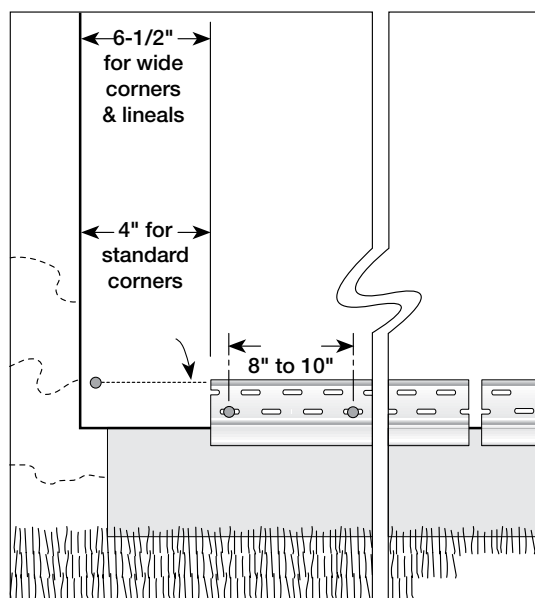
Installing the starter strip

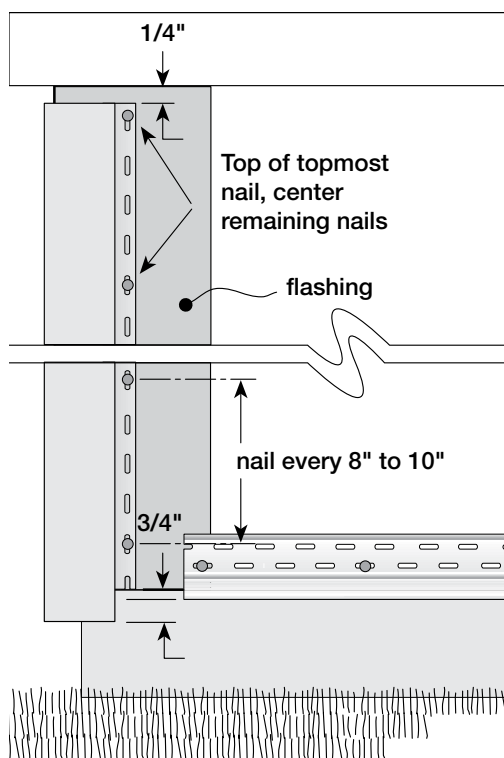
Position the starter strip with the top edge on the chalk line and the ends 6-1/2" away from the outside and inside corners (when using lineal systems or wide corners), 4" if using standard one-piece corners. Nail to wall following previously mentioned nailing instructions. When hollows occur in the wall surface, shim out the starter strip to avoid a wavy appearance in the finished siding job. Nail every 8" to 10".

As you add starter strip sections, be sure to leave 1/4" space between them for expansion.

Sometimes—especially at sills above garage doors, porches or brick surfaces where the siding has been cut lengthwise—you may find it easier to use a combination of utility trim and J-channel as a starter strip to secure a panel.

If you are concerned that the house is not level, measure down from the soffit at one corner of the house to the top of the foundation and subtract the width of the starter strip minus 1/4". Mark the wall, then transfer the measurement to the other corner of the wall. Snap a chalk line in between the corners at the marks.





Outside Cornerposts

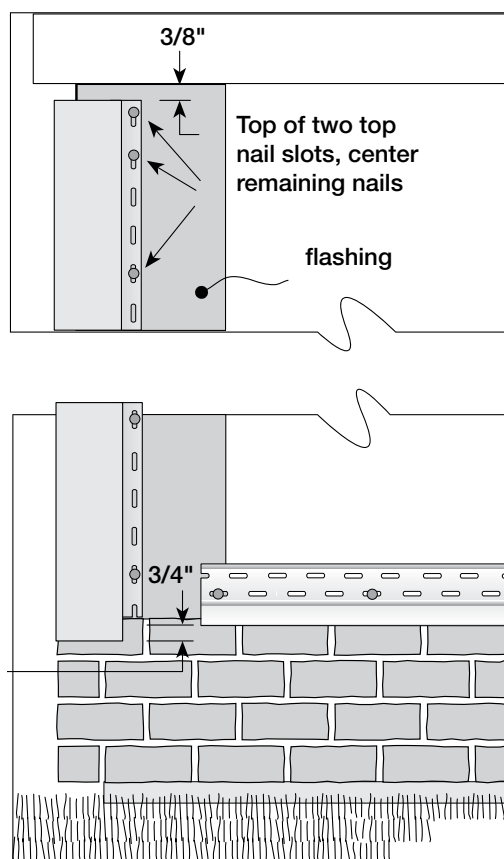
Flash the corners of the home by bending a 20"-wide piece of aluminum trim coil 90° so you have two 10" legs. Cover the entire length of the corner, lapping the upper pieces over the lower pieces. (Self-adhering flashing may be substituted for trim coil. Follow the manufacturer's installation instructions and observe local building code requirements.)

For cornerposts 12' long or less

Position the outside cornerpost so that the top of the post is 1/4" from the underside of the eave. Extend the bottom of the cornerpost 3/4" below the starter strip.

Before nailing, make sure the post is straight and true. Hang the cornerpost by first positioning a nail at the top of the topmost nail slot. Position all remaining nails in the center of nail slots a maximum of every 8" to 10". Leave 1/8" to 1/16" between the nail head and the cornerpost to allow the cornerpost to move during normal expansion and contraction. (DO NOT NAIL TIGHT.) Follow this nailing pattern on both nail flanges of each post.

NOTE: CedarBoards corners install similar to standard outside cornerposts.



For cornerposts longer than 12' long

Position the outside cornerpost so that the top of the post is 3/8" from the underside of the eave. Extend the bottom of the cornerpost 3/4" below the starter strip.

Before nailing, make sure the post is straight and true. Hang the cornerpost by first positioning a nail at the top of the two top nail slots slot. Position all remaining nails in the center of nail slots a maximum of every 8" to 10". Leave 1/8" to 1/16" between the nail head and the cornerpost to allow the cornerpost to move during normal expansion and contraction. (DO NOT NAIL TIGHT.) Follow this nailing pattern on both nail flanges of each post.

NOTE: When installing any hanging cornerpost longer than 12', position the fasteners at the top of the top two nail slots on each side of the corner.

Transitioning from masonry to stucco

Position the bottom of the cornerpost 3/4" below the starter strip. If the corner is less than 12', leave 3/8" from masonry/flashing to allow for expansion. If the corner is greater than 12', leave 5/8" from masonry/flashing for expansion.

NOTE: If the transition material allows, the bottom 3/4" of the channels may be removed from the outside cornerpost so that the face of the corner may be positioned lower and more in line with the bottom of the siding. This method creates a transition with more pleasing aesthetics. The outside cornerpost face must still maintain 3/8" or 5/8" clearance from obstructions.

If posts must be spliced for high walls, you have two options:

Option 1

Cut 1" off the nailing flanges and back so just the face of the outside cornerpost remains. Then lap 3/4" of the upper post over the lower post, allowing 1/4" gap for expansion. This method will provide an obvious joint between the two posts, but will allow water to flow over the joint, reducing the chance of water infiltration.

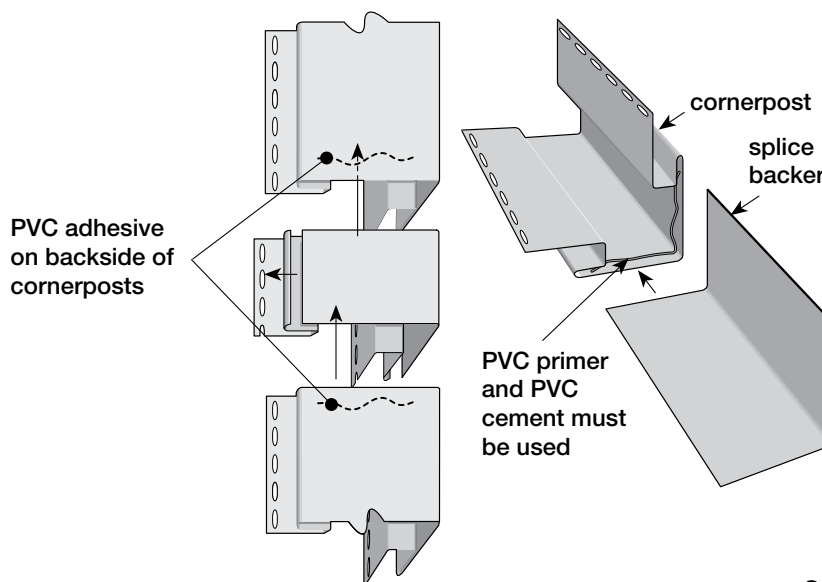
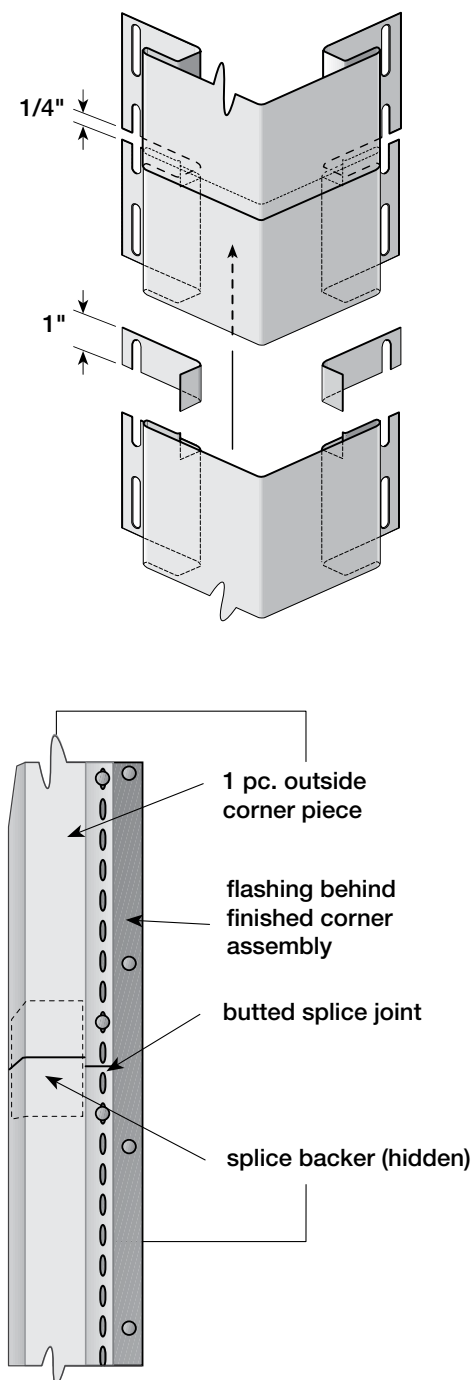
When the bottom edge of a cornerpost terminates into a porch, deck, brick, stone ledge, or roof line, etc., allow 3/8" for every 10' of corner when the ambient temperature is above 40°F; 1/2" for every 10' of corner when the ambient temperature is 40°F or below.

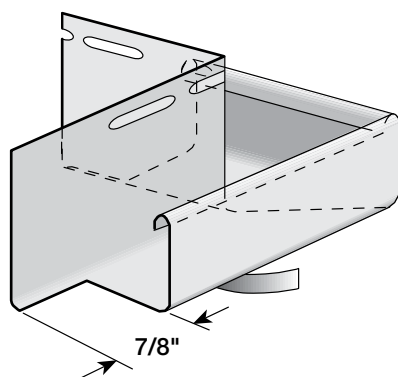
NOTE: It is acceptable to reverse lap outside corners as long as the corners are properly flashed and water can drain from the bottom of the cornerpost.

Option 2

Cut a 6" length of cornerpost and trim the nail flange, receiving channel, and sides until you have just a 90° bend of vinyl. Using PVC primer and PVC cement, glue the bent piece to the inside of the upper post and lower post. Butt the two posts together. Nail the entire assembly as one post with all nails in the lower post centered in the nail slots.

Also see additional instructions covering installation of four-piece cornerposts (page 40).

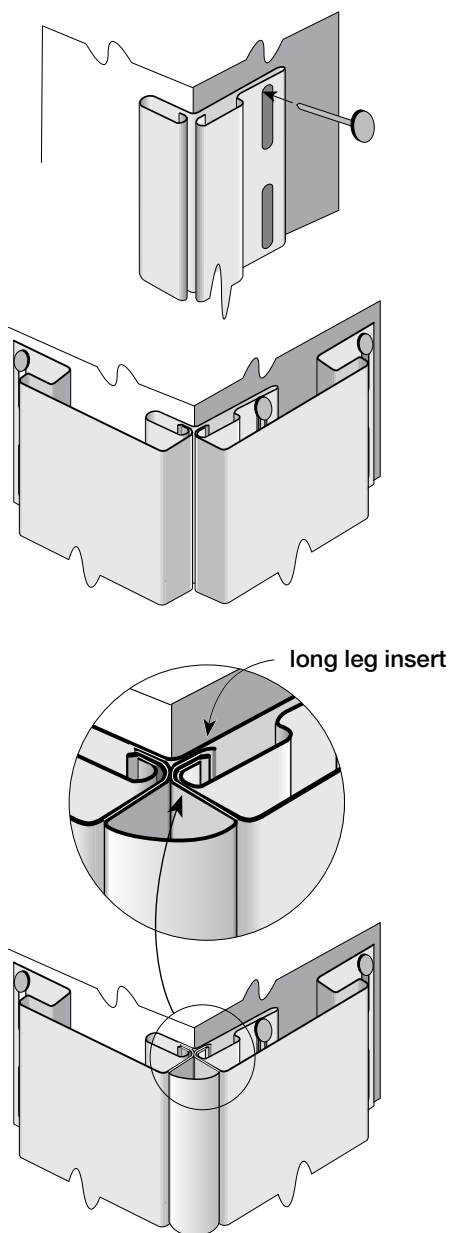




Capping an outside cornerpost

One method of capping an outside cornerpost is to cut a piece of J-channel twice as long as the width of the corner-post face. Mark a 90° angle from the center and cut out this area. Then cut 7/8" away from each end, except for the nailing flange. Bend the J-channel in the center and nail it to the outside of the corner of the house. Then insert the cornerpost into the J-channel.

Another alternative is to trim the nail flange, receiving channel, and sides from the bottom 1" of the cornerpost. Notch 1" at the 90° bend, fold the bottom 1" of the cornerpost face, and fasten these "flaps" with a pop rivet.



Extra Wide Corner Posts (Four-Piece Corner System)

Extra-wide cornerposts give you a distinctive, easy-to-install method of finishing outside corners. Each cornerpost consists of four parts: corner starter, two lineals, and a quarter-round snap-in insert.

Lineals are available in two board styles: 5" smooth and 3-1/2" smooth.

The installation procedure is identical for all lineals and inserts. To install this four-part accessory, follow these steps:

Before you begin, make sure the corners are flashed properly.

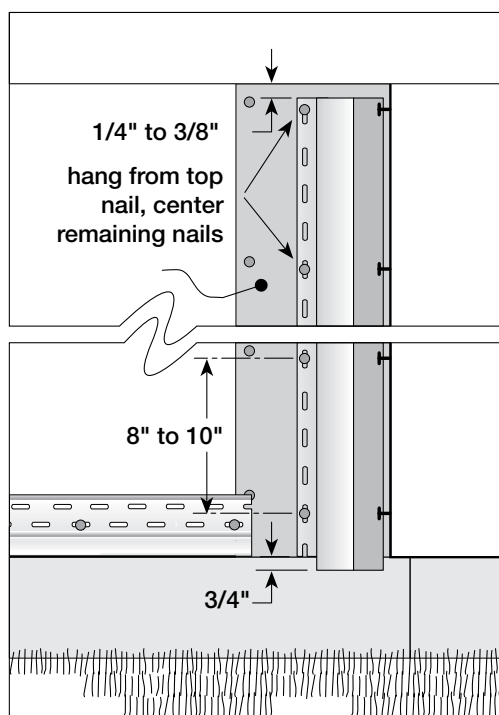
Measure the vertical span, and allow 1/4" from the underside of the eave if the post is 12' or shorter and 3/8" from the underside if the post is longer than 12'. Extend the cornerpost 3/4" below the bottom of the starter strip. Cut all four pieces using a power circular saw.

Hang a starter strip. Position the starter strip, leaving 1/4" allowance for expansion at the top and 3/8" at the bottom. Position the first nail at the uppermost edge of top nail slot (shown). Nail loosely. Working from the top down, position the remaining nails every 8" to 10", with the nails centered in the slots.

Attach the side lineals. Lock the first lineal into the starter strip. Nail it to the sheathing, following the procedure described above. Repeat the process for the other lineal.

Snap in the quarter-round corner insert. Working from the bottom up, begin by inserting the longer leg of the insert into the nail flange side of the starter strip first; then snap in the shorter leg. Lightly press along the length of the insert as you snap it into place.

NOTE: For a more secure installation, use a pop rivet to attach the molding insert to a side lineal. The rivet should be positioned at the top of the cornerpost.

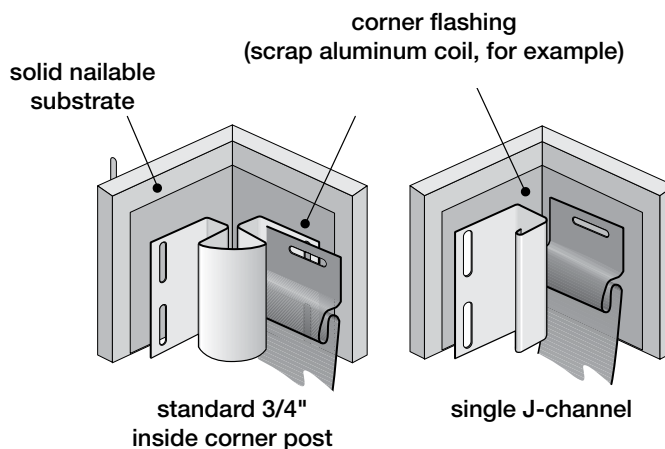


Inside Cornerposts

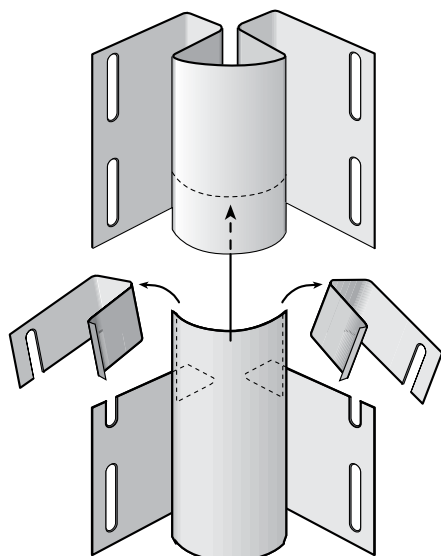
There are three options for trimming inside corners: Standard 3/4" inside cornerpost, single J-channel, and two J-channels.

To flash the inside corner, bend a 20"-wide piece of aluminum coil stock 90° so you have two 10" legs. Insert the flashing into the corner. If you use more than one piece of flashing, overlap the upper pieces of the flashing over the lower pieces.

To install inside cornerpost, hang the post from the top of the eave. The bottom should extend 3/4" below the starter strip. Remove the bottom 3/4" of the nailing flange so it does not show below the siding. Set the post straight and true. Position the top nail in the top of the nailing slot. All other nails should be in the center of the nail slots



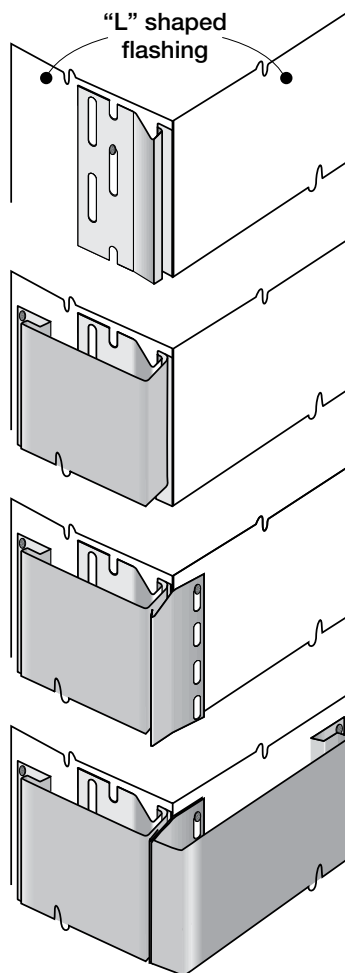
inside cornerpost splice



If you have to splice the inside cornerpost, cut 1" off all but the outer face of the lower post. Lap 3/4" of the upper post over the lower post, leaving 1/4" for expansion.

If you are using two pieces of J-channel instead of inside cornerpost, flash the corner with a 10" x 10" "L" corner fabricated from aluminum coil stock or any weather-resistant barrier. Hang the J-channel from the top of the eave. The bottom should extend 3/4" below the starter strip. Remove the bottom 3/4" of the nailing flange so that it will not show below the siding. Use the same positioning and nailing guidelines as inside cornerpost.

To create a narrower corner, you can also use a single length of J-channel and flashing. First, install the siding on one wall. Then place the J-channel lightly against the siding and nail it to the substrate on the adjacent wall. Follow the same positioning and nailing guidelines as inside cornerposts.



Federal Corners

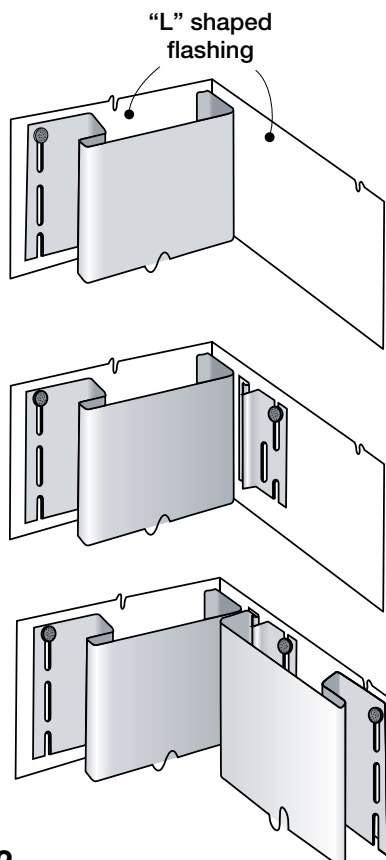
To create a federal-style corner, flash the corner with aluminum trim coil or other flashing materials. Hang a new construction starter strip. Position the top nail in the top of the nailing slot. All other nails should be centered in the slots spaced 8" to 10" apart.

Position and secure the 3-1/2" lineal.

Position and secure an aluminum starter strip.

Position and secure the 5" lineal.

NOTE: Aluminum starter can be used for both lineals. If the aluminum starter used for the 5" lineal is not long enough, fashion a starter using a metal brake and coil stock to a length that allows for proper nailing into the substrate.



Inside Federal Corners

Flash the corner with aluminum trim coil or other flashing materials.

Position and secure the 5" lineals (or a 3-1/2" lineal) by butting the lineal up to the inside corner. Using a 5" lineal will create a symmetric 3-1/2" exposure in the corner. If two 3-1/2" lineals are used, one exposure will be approximately 2-1/4" and one will be 3-1/2".

NOTE: Attaching the second lineal will keep the first lineal in place. You will not need a starter strip. Always position the top nail in the top of the nailing slot. All other nails should be centered in the slots spaced 8" to 10" apart.

Position and secure the starter strip.

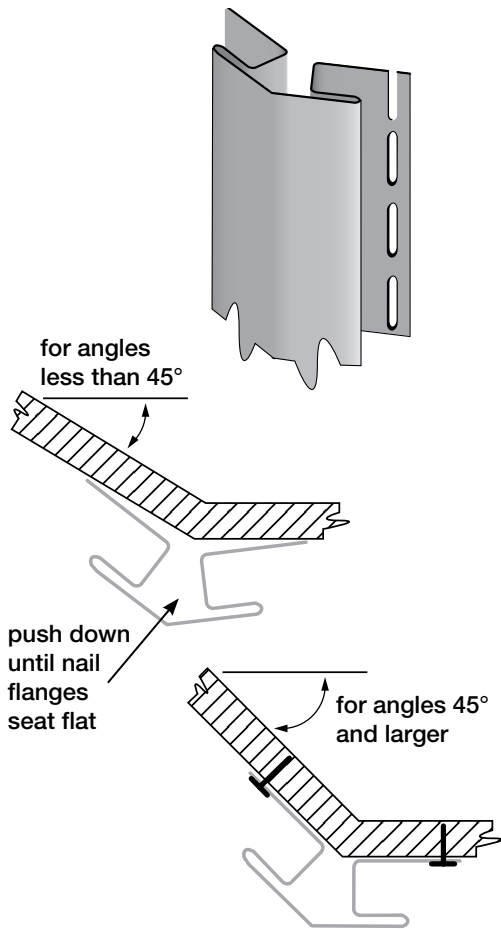
Position and secure the remaining lineal.

Trimming Bay Window Corners

There are several ways to trim the odd angles of bay windows. Here are two of them:

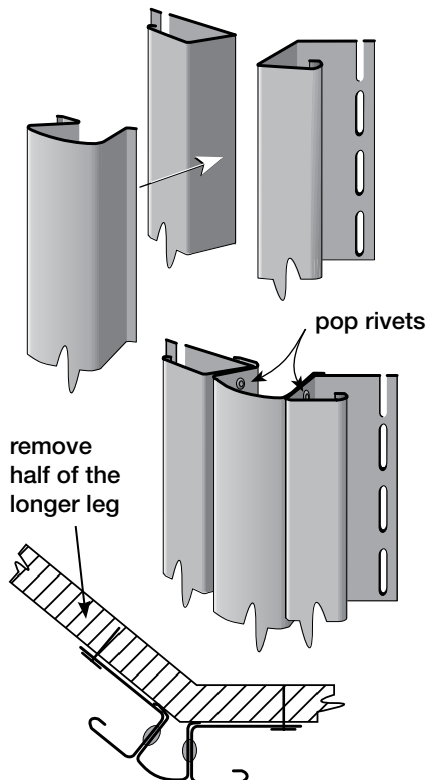
1. Install bay window cornerpost.
2. Install J-channel with a quarter-round insert.

Before you begin, make sure the corner is properly flashed.



Install bay window cornerpost

- Cut bay window cornerpost to the proper length.
- For angles less than 45°, push down on the face of the corner until the nail flanges seat flat against the wall surfaces.
- Hang the cornerpost by nailing loosely into the topmost nail slot.
- Make sure the cornerpost is straight and true.
- Position all remaining nails in the center of nail slots a maximum of every 8" to 10". Leave 1/8" to 1/16" between the nail head and the cornerpost to allow the cornerpost to move during normal expansion and contraction.
- Fit the siding into the cornerpost.

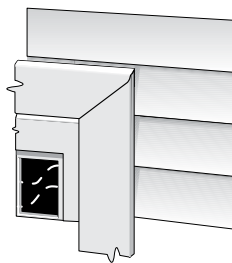


Install J-Channel with quarter-round insert

- Cut two pieces of J-channel and one piece of quarter-round insert to length.
- Pop rivet the J-channels to each side of the quarter-round insert in at least three places.
- Nail the assembly to the corner, remembering to hang the assembly from the topmost full nail slot.
- Position all remaining nails in the center of nail slots a maximum of every 8" to 10". Leave 1/8" to 1/16" between the nail head and the J-channel for normal expansion and contraction.
- Fit the siding into the J-channels.

See page 109 for installing bay window corners with Cedar Impressions Siding.

Decorative Trim Options around Windows and Doors



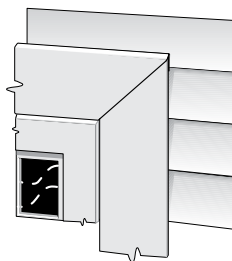
2-1/2" Window and door casing

System requires 2-1/2" window and door casing.



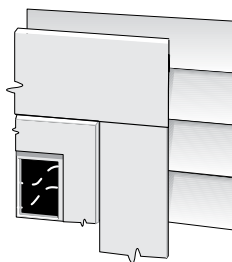
3-1/2" Snap-on lineal

System requires 1" face J-channel.



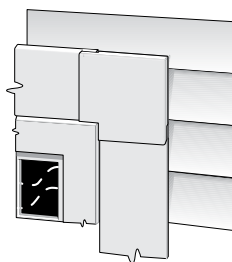
3-1/2" Lineal system

System requires 3-1/2" lineals and starter strips.



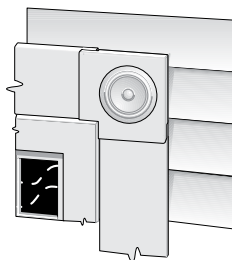
5" x 3-1/2" Lineal system

System requires 5" lineals, 3-1/2" lineals, and starter strips.



3-1/2" Lineal system with corner block

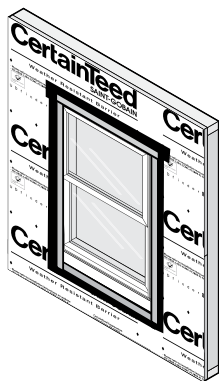
System requires 3-1/2" lineals, starter strips, and lineal corner block.



3-1/2" Lineal system with corner block and rosette

System requires 3-1/2" lineals, starter strips, lineal corner block, and rosette.

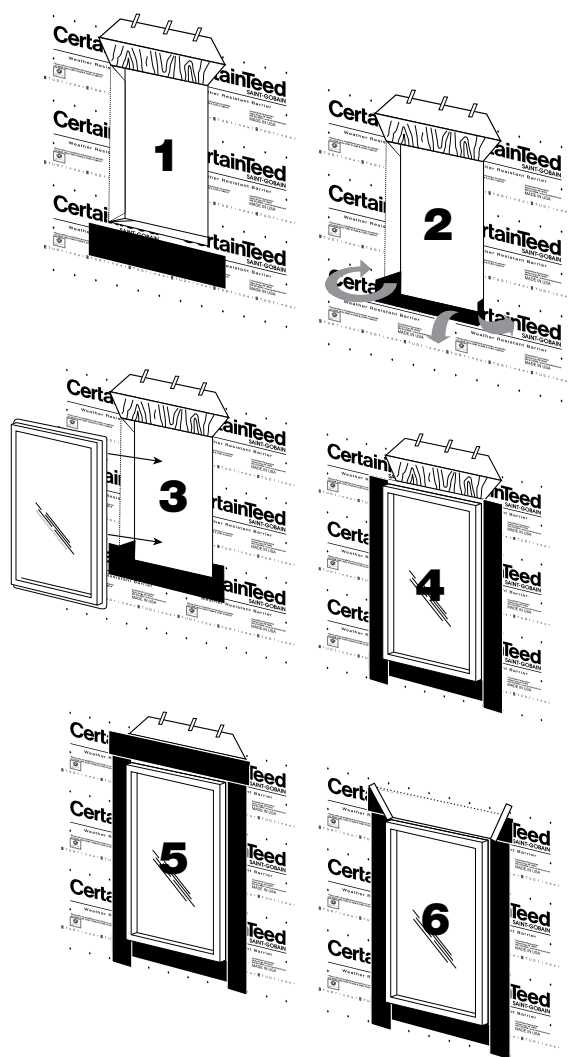
Window Flashing



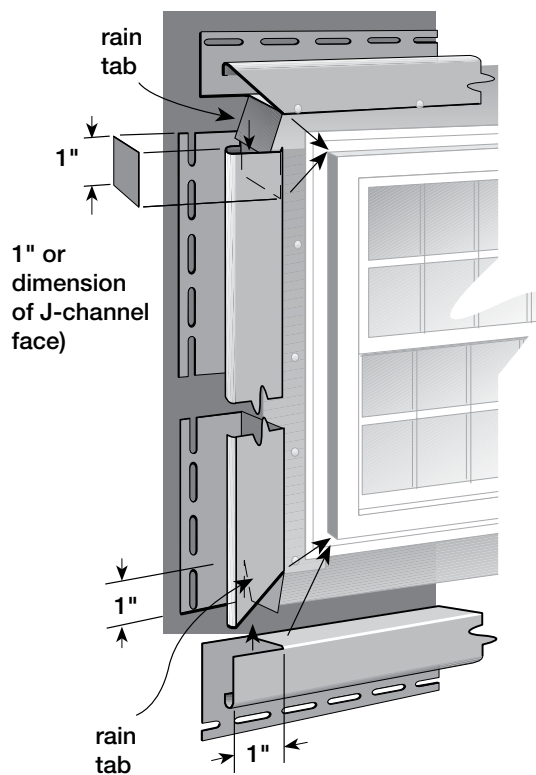
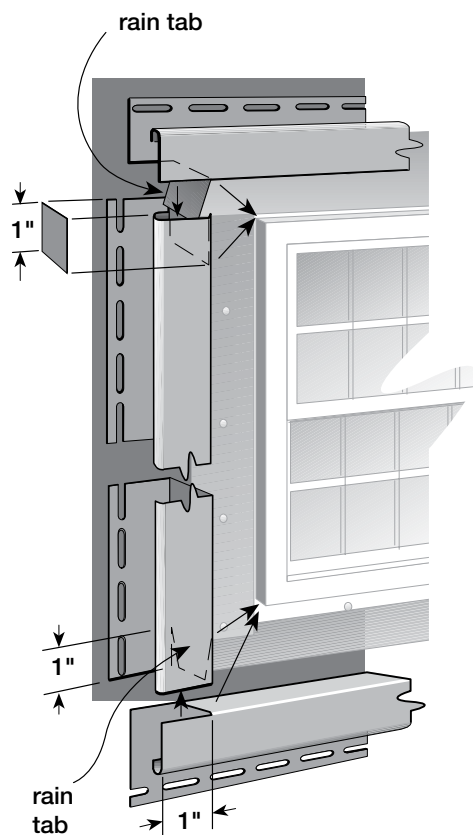
If installing a new window and flashing, refer to the window manufacturer's instructions and ASTM E2112, Standard Practice for Installation of Exterior Walls, Doors, and Skylights for the proper flashing installation method for the window type and wall configuration of the project.

The width of all flashings is determined by the type of accessory surrounding the window and where the final complete course of siding stops below the window (in the case of the flashing under the window). The flashing should extend past the nail flanges of the accessory. The width of the flashing under the window must allow for the diversion of water.

Installing CertaFlash BA around a rectangular window



1. Make diagonal cuts in the weather-resistant barrier at the upper corners of the top (head) of the rough opening. Gently lift and tape the flap temporarily in place.
2. Cut a piece of CertaFlash Flex flashing for the bottom (sill) that is 12" longer than the width of the rough opening. Remove the backer from the flashing and begin applying one end to the jamb of the rough opening 6" above the sill. (NOTE: the tape will extend over the exterior edge of the jamb.) Applying even pressure to the tape with your hands, work your way down the jamb, across the sill, and up the opposite jamb, finishing 6" above the sill. Flex the overhanging tape down onto the wall, covering the weather resistant barrier in weatherboards fashion, again applying even pressure to ensure adhesion.
3. Before installing the window, apply a continuous bead of sealant to the interior of the window's mounting flange. Install the window according to the manufacturer's instructions.
4. Cut two strips of CertaFlash BA for the sides (jambs) of the window. Jamb flashing tape should extend a minimum of 3" above the top of the jambs of the window unit and a minimum of 1" beyond the bottom flashing tape installed in step #2, covering the width of the previously installed flashing at the base. Slowly peel release paper off as you press the flashing in place. Ensure the flashing covers all nails and mounting slots on the window's mounting flange.
5. Cut BA flashing for the top (head) of the opening so it will extend beyond both ends of the jamb flashing. Ensure the flashing covers all nails and mounting slots on the window's mounting flange.
6. Finally, lay weather resistant barrier over the head flashing. Apply CertaTape over both diagonal cuts.



Installing Window and Door Trim

Install J-channel along the top and sides of door casings and around windows.

NOTE: When installing J-channel around replacement windows that do not have nail flanges, add flashing for greater protection against water infiltration. For an example of completed flashing, see the previous page.

There are two methods of joining J-channels at corners. The easiest method is to square cut the corners. For a more finished appearance, you can miter the corners. To prevent gaps, do not butt ends. Instead, lap them as shown.

To square cut corners

Install J-channels at the sides of the windows. Notch them as shown.

NOTE: For best results, use aviation snips when cutting J-channel.

Cut the top and bottom J-channels so the ends extend beyond the casing to the width of side J-channels.

Place the top J-channel along the casing shoulder and nail it to the wall.

Make two cuts in the bottom of the upper channel and bend it down to overlap the side J-channel. Repeat for the other side. This forms a water drain and allows the J-channel to receive siding panel.

Nail the bottom J-channel in place. Cut the channel as previously described. Fold the rain tabs into the receiving pockets for a tighter miter joint.

To miter cut corners

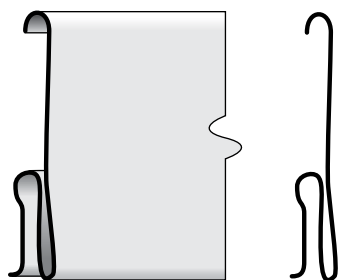
For best results, make sure you cut all J-channels to the proper length, leaving the proper allowance for the width of the face of the J-channel.

Square cut the bottom J-channel so that its ends extend beyond the window casing to the width of the face of the side J-channels. Notch the ends for clearance. Position and nail the J-channel.

Measure the side J-channels, adding the width of both the top and bottom J-channels. Miter cut (45° angle) the lower ends of both side J-channels. Notch the channel to form a rain tab, position it and nail.

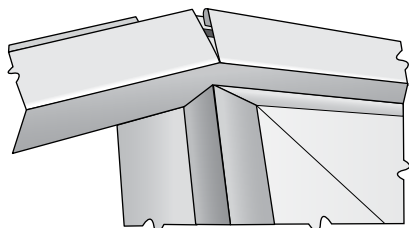
Mark the top J-channel so its ends extend beyond the casing to the width of the side J-channels. Miter cut (45° angle) the ends. Cut and bend rain tabs. Position and nail.

NOTE: You can create blind miters on a J-channel using a J-channel cutter.

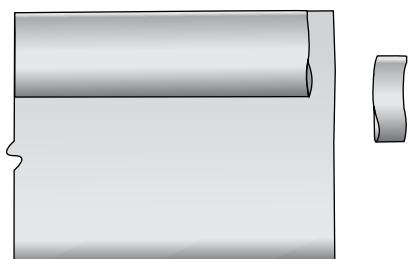
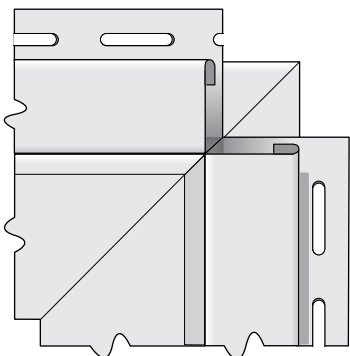


3-1/2" Snap-on Lineal Application around Windows and Doors

This application works only on 1"-faced J-channel.



The installation of J-channel for snap-on lineals is the same procedure as installing lineal starter strip. Measure the openings and cut the J-channel 1/2" less than your measurement. Install the J-channel around the opening, centering the J-channel so that each end of the J-channel is 1/4" from the opening. Nail the J-channel every 8" to 10".



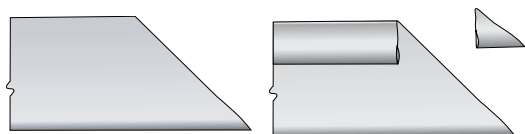
Lineal application around windows

Measure the top of the casing and add 7" (3-1/2" extra for each side). After the piece is cut to length, flip it over and cut 3/8" off the locking leg as shown.



Snap the lineal over the J-channel as shown.

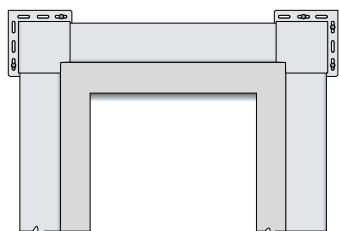
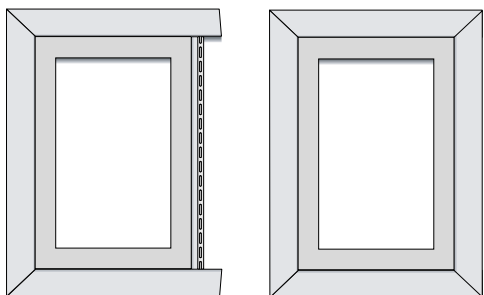
Repeat the process for the bottom of the casing.



Measure the side casing and add 7". Use a triangle to create a 45° angle or measure 3-1/2" in from the edge of the part. Use snips or a miter saw to remove this portion.

Flip the part over and remove the locking leg as shown. This should be done to both ends.

Snap the lineal over the J-channel as shown. Use the same measurements for both sides.



Corner blocks

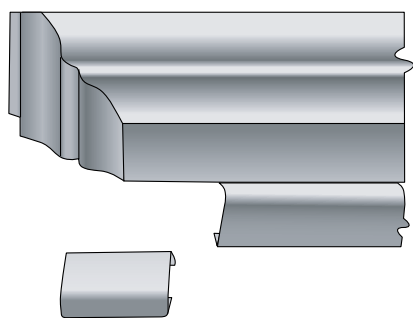
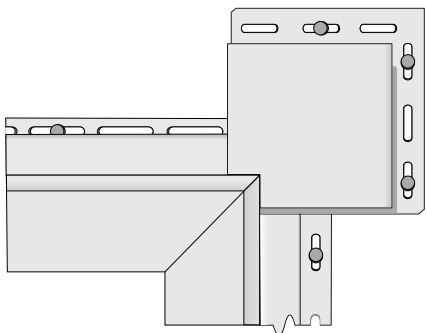
Install J-channel around the perimeter of the window opening. J-channel should be the same length as the casing.

Install corner blocks on all 4 corners as shown. Leave blocks loose until the lineals are installed.

Cut the lineals the same length as the window casing.

Start with one end and angle a lineal into the corner block and snap it over the J-channel.

Continue installing lineals around the window.



Crown molding

Crown molding will fit over the top of the lineal system.

Install J-channel and lineals around window casing.

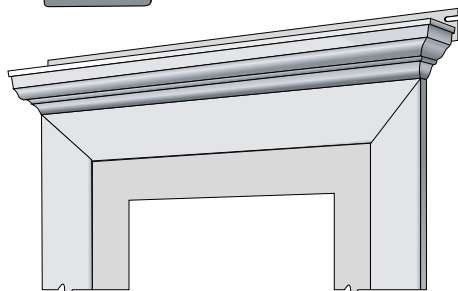
Measure the top lineal and add 2-1/2". This will be the crown molding length.

Insert crown molding cap into the crown molding and trace the shape. Trim off the marked line.

The crown molding requires a tab 2" long—cut from the pocket receiver as shown.

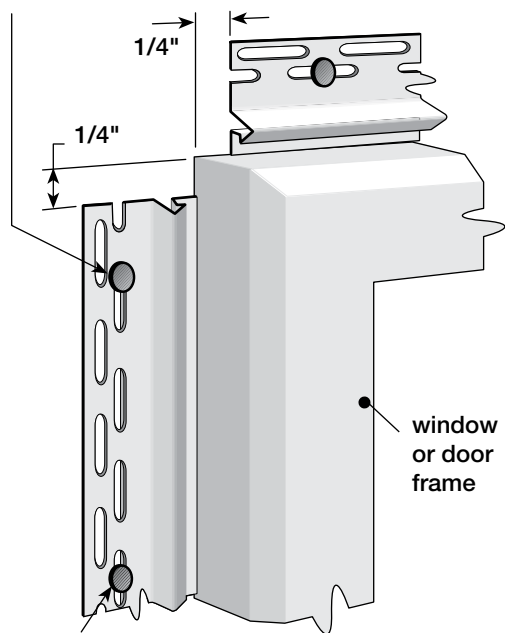
Cut the crown molding cap in half and apply the halves with a bead of caulk.

Insert the crown molding into the top of the lineal as shown.



measure window and subtract 1/2"
(leaving 1/4" per side as shown)

vertical pieces: place the uppermost
nail in top of nail slot (still loose nailed)



remaining vertical nails and all
horizontal nails: place in center of slots

Lineal Starter Application for Windows and Door Surrounds

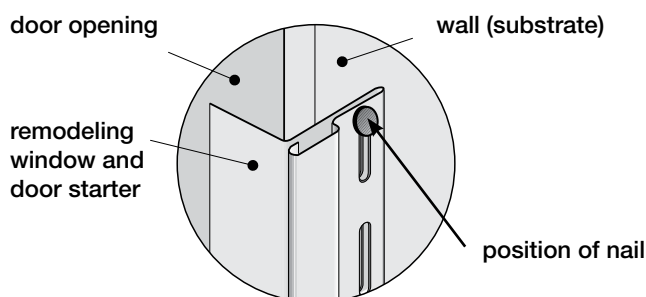
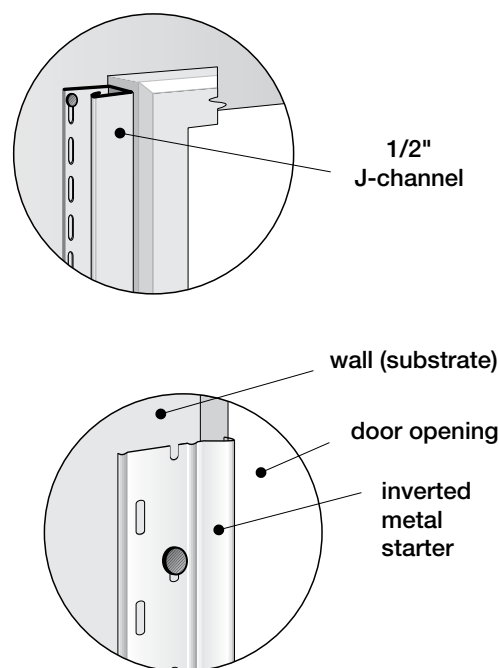
When securing window and corner starter strips, outside corner pieces (OSCP), inside corner pieces (ISCP), one piece corners, lineals—basically, any vertically mounted siding product—always place the top nail (or staple) first, and in a manner that allows the part to hang from it without dropping. This promotes movement downward only, a must for a good corner joint. This is the only time you should not center a nail (or staple). It is also preferred to use the nail slots closest to the locking area (when using product with double nail slots).

Remember to place the nails for the horizontal pieces in the center of the nailing slots as shown. Space nails 8" to 10" apart.

Using a 1/2" J-channel as a starter for lineals

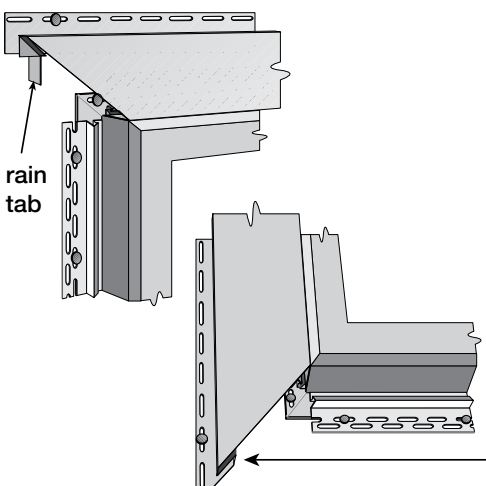
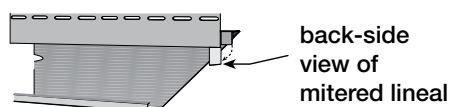
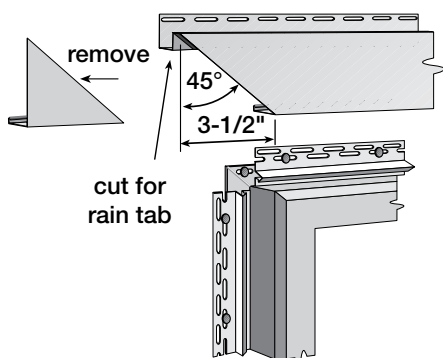
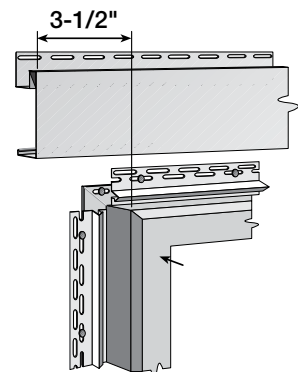
NOTE: Slide the lineals on from either end of the J-channel (the lineal will not snap over the J-channel as with a New Construction Starter Strip), or pull the J-channel away from the window slightly and zip the lineal into place.

If the opening has no framework, such as a brick molding, use the metal starter (illustrated below left), or the Remodeling Window and Door Starter (illustrated below) in place of the New Construction Window and Door Starter Strip shown above. The lineal's locking leg will fit behind the aluminum starter and into the receiving pocket of the Remodeling Window and Door Starter.



Lineal Application around Windows

Measure the top of the opening and add 7" (3-1/2" extra for each side) if the side lineals are also 3-1/2". Add 10" total if using 5" lineals.



Use a triangle to create a 45° angle or measure 3-1/2" in from the locking leg.

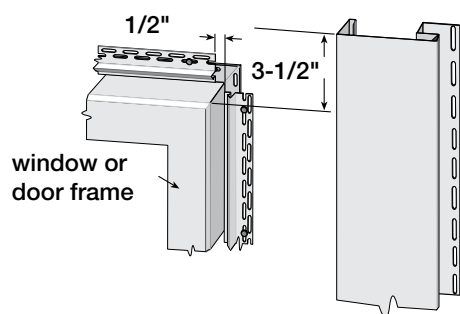
NOTE: The nail flange is always the longest part of a surrounding miter.

Use snips to remove the part as shown.

Cut a 3/4" rain tab (as shown).

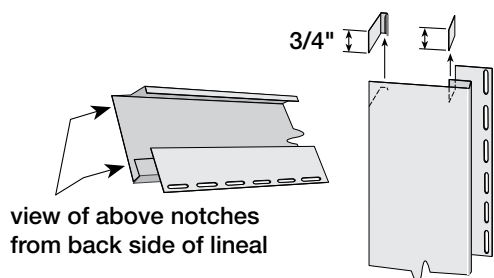
Snap the completed top lineal into the previously attached starter strip.

NOTE: The bottom miter of side lineals has the same cut as both ends of a top lineal.

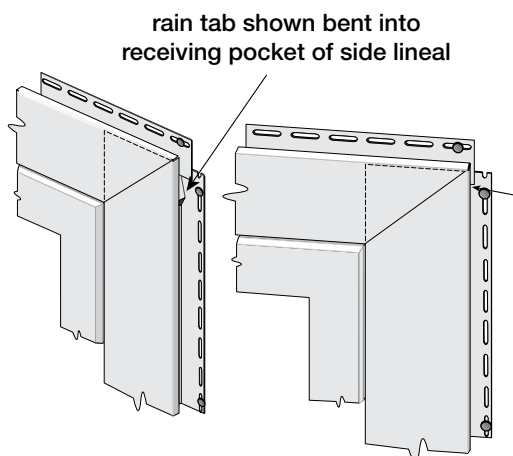


Measure the height of the window or door. Add 7" (for the 3-1/2" header and bottom lineal) and cut.

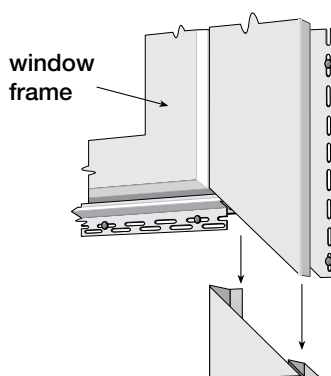
NOTE: Add additional material if using 5" lineals.



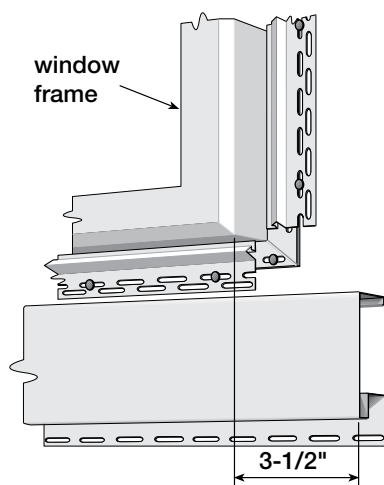
Trim a minimum of 3/4" from the top end of the side lineals.



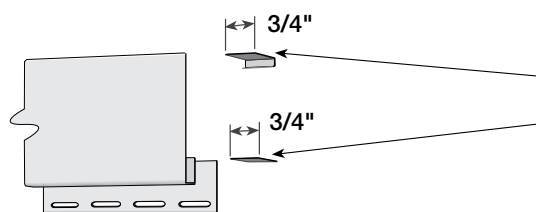
Snap the side lineals into place, making sure the rain tabs of the top lineal are bent down into the receiving pocket of the side lineals.



If the lineal surrounds a window frame, the bottom corner requires a 45° miter as done previously for the top lineal.

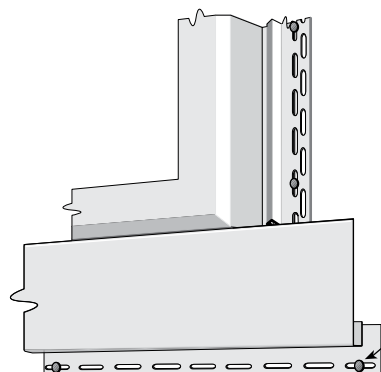
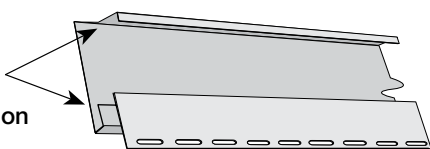


Measure the bottom of the opening and add 7" (3-1/2" extra for each side) if the side lineals are also 3-1/2". Add 10" total if using 5" lineals.

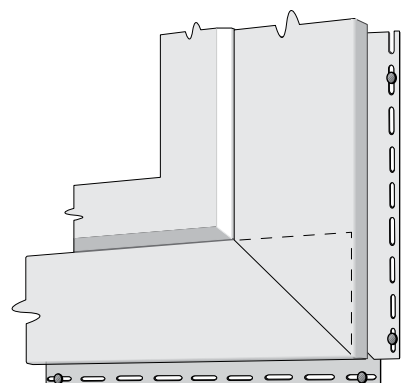


Trim 3/4" tabs from the lineal as shown.

view of notching from back side (same on both ends)

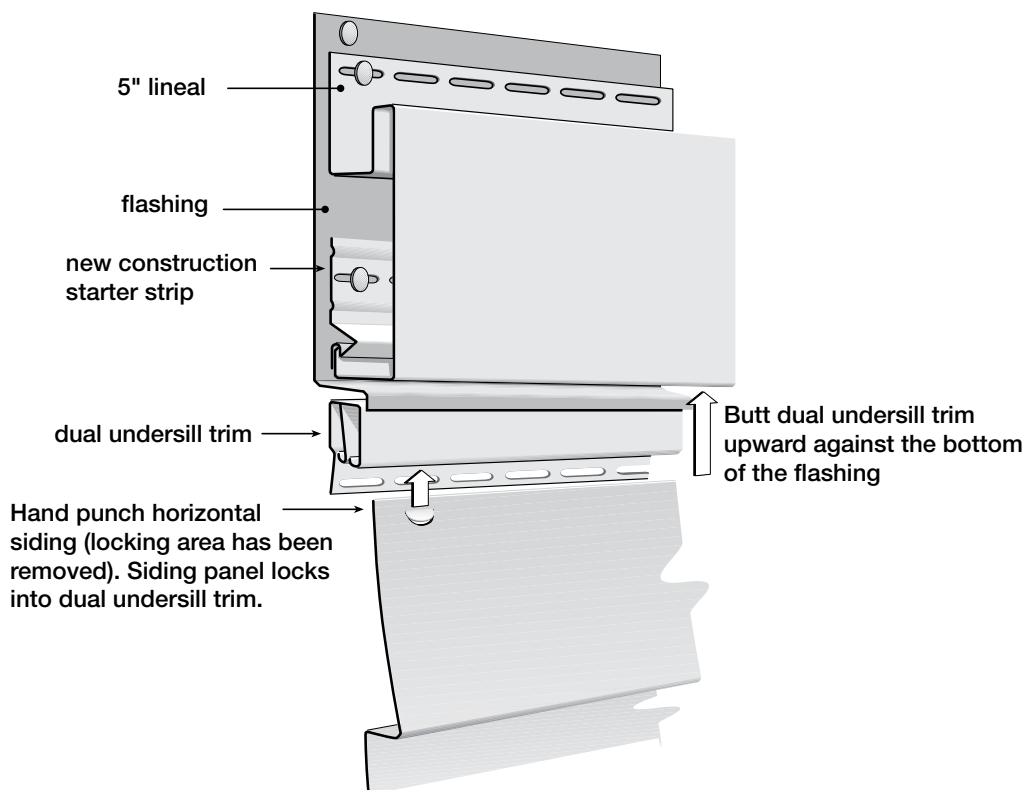


Snap the lineal in place and secure by nailing (or stapling) it through center of the nail slots.

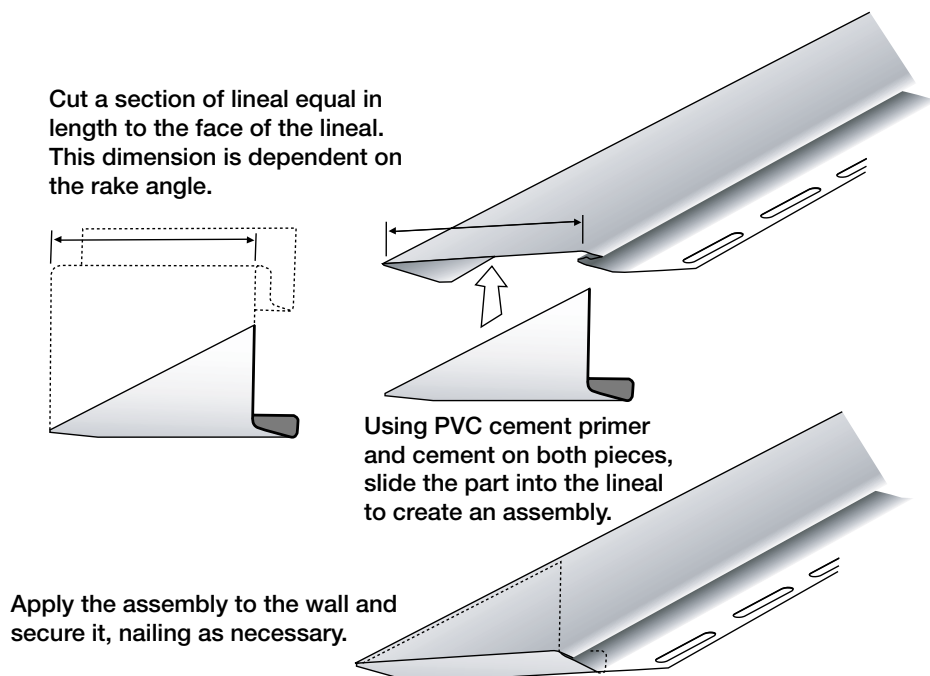


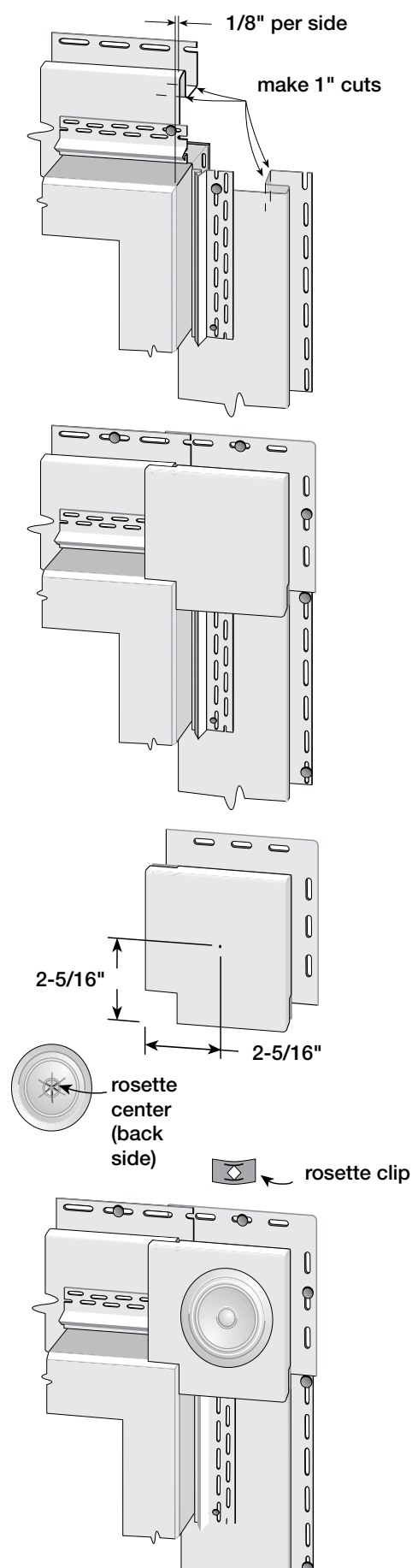
finished assembly with side lineal

Lineals over Horizontal Siding



Capping a Lineal Used as a Rake Board





Corner Blocks

Corner block

Install 1/2" J-channel as a starter. Measure and cut the side lineals to the exact size of the window or door opening.

Cut the top and bottom lineals 1/4" longer than the window.

Using vinyl snips, make two 1" long cuts in the pocket areas on both sides of each lineal. These cuts allow the lineals to connect with the corner block and help provide proper drainage.

NOTE: It may be helpful to hold off securing the lineals until the corner block is in place.

Position the corner block by inserting the top lineal into the corner block's receiving area—making sure the lineal's pocket is inside that of the corner block.

Position the vertical (side) lineal into the corner block by inserting the pocket of the corner cover into the pocket of the lineal. This will ensure proper drainage.

Corner block with rosette

Locate the small dimple on the back side of the block's face or measure 2-5/16" as shown and mark.

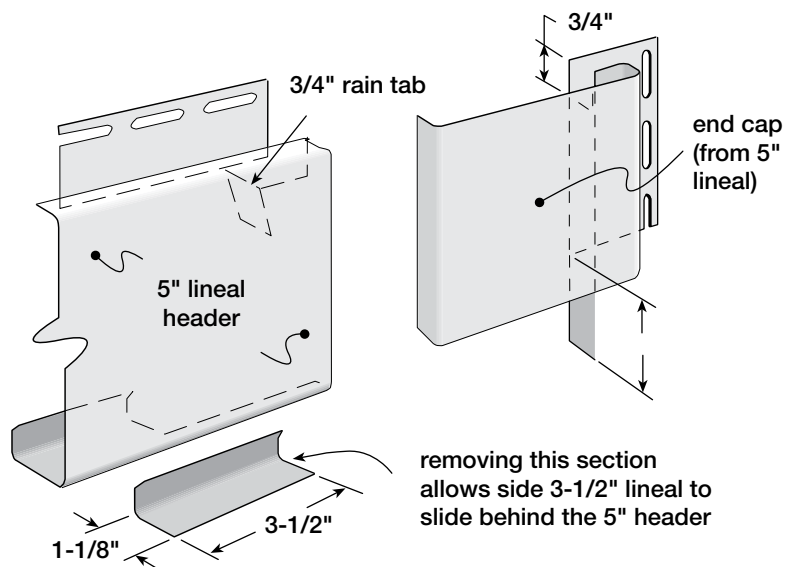
Drill or punch a 3/32" to 1/8" diameter hole through the face of the block—the hole must not be larger than 1/8".

NOTE: Check the back side of the block for this location—marked by "+".

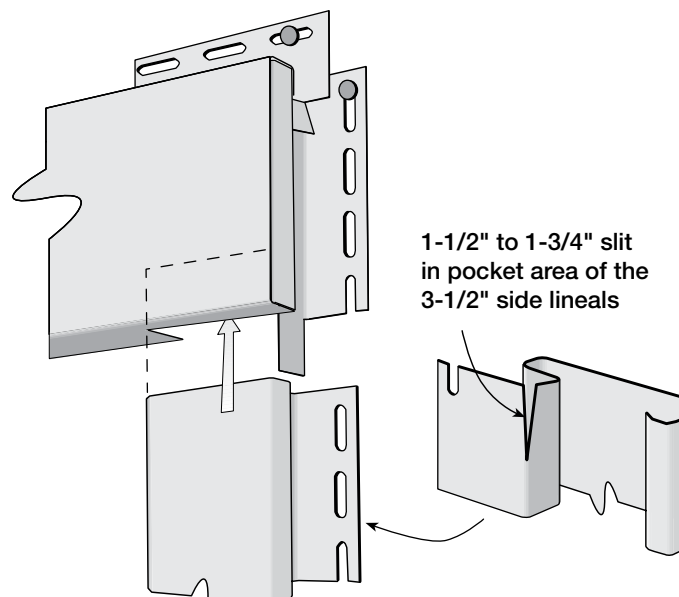
Apply the rosette clip from the backside. If desired, a small amount of caulk can be applied over the hole prior to applying the rosette.

5" Square Header with End Caps over 3-1/2" Lineals Sides and Bottoms

Assemble the 5" header and cap. The side 3-1/2" lineals should extend approximately 1" inside the header assembly.



Finish the corner by sliding the 3-1/2" side lineals behind the header, making sure the 2" rain tab on the end cap extends into the receiving area of the side lineals.



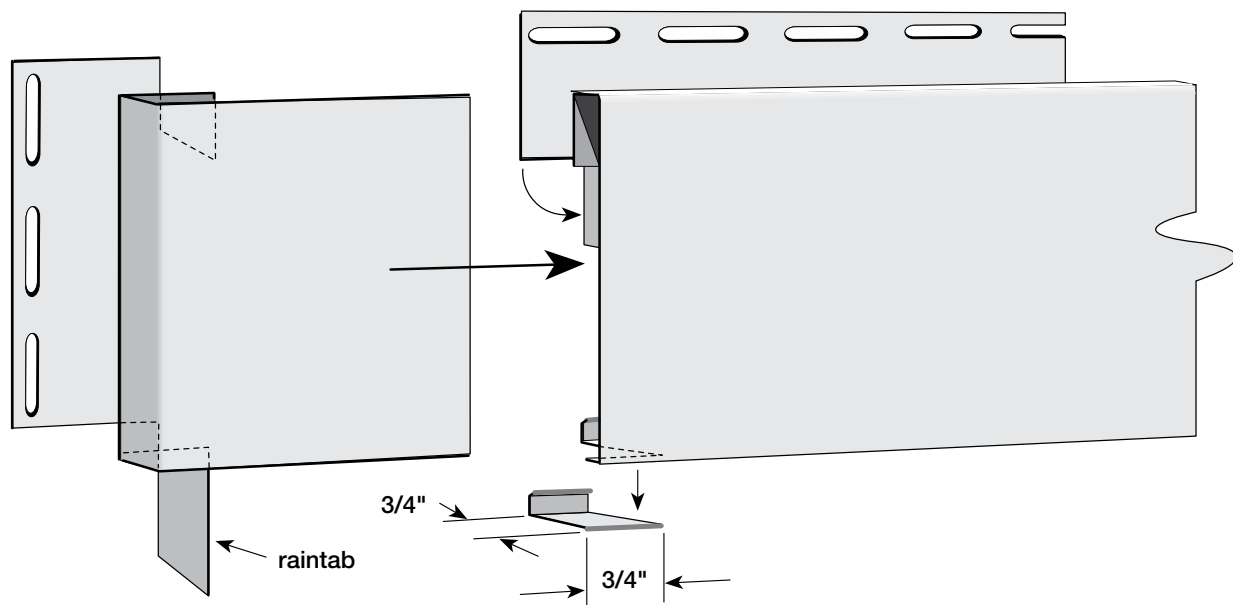
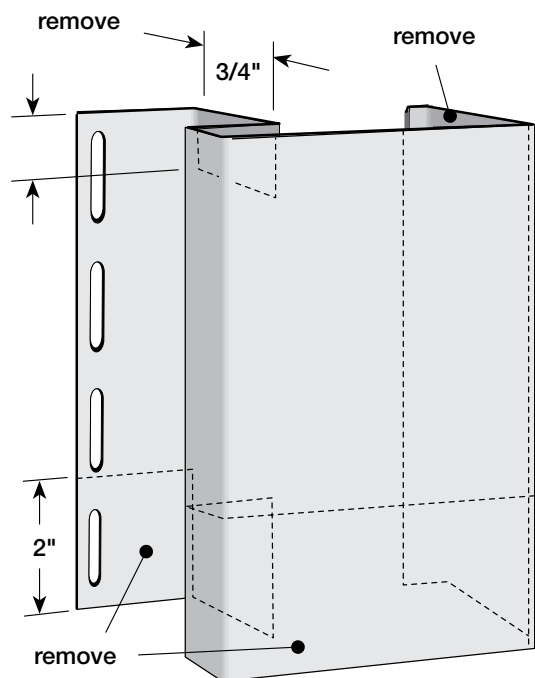
NOTE: If using crown molding, see page 58.

Creating End Caps for 5" Lineals

To create the header, first cut a 7" piece of 5" lineal. Measure and trim as shown.

The resulting piece fits into the end of the 5" lineal.

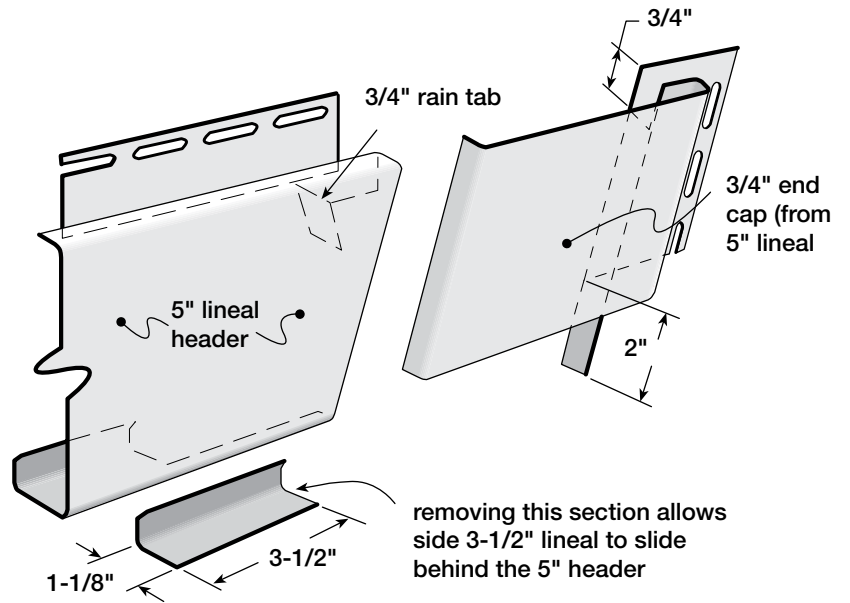
The ends of the 5" lineal also need trimming to receive the end caps. Create a 3/4" rain tab in the pocket area and trim off a 3/4" tab from the bottom.



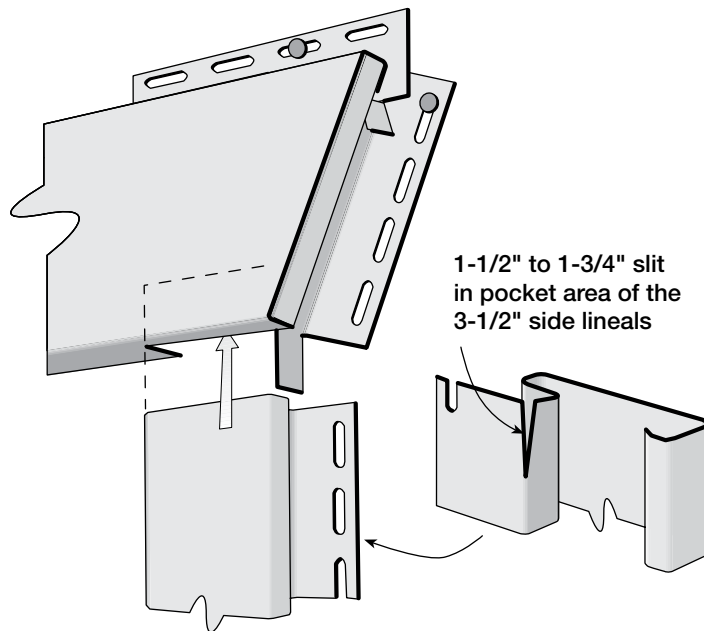
NOTE: To make end caps for 3-1/2" lineals, simply start with a 5-1/2" piece and remove the 3/4" and 2" areas as shown for the 5" end caps.

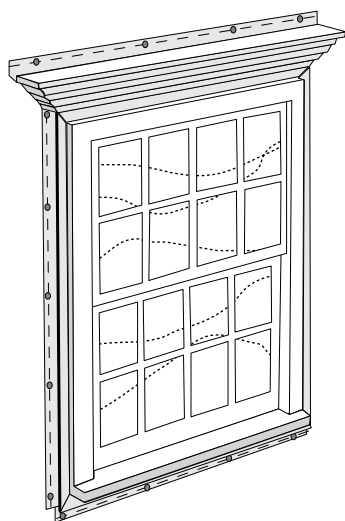
Slip Joints for Lineal Corners

Assemble the 5" header and cap. The side 3-1/2" lineals should extend approximately 1" inside the header assembly.



Finish the corner by sliding the 3-1/2" side lineals behind the header, making sure the 2" rain tab on the end cap extends into the receiving area of the side lineals.



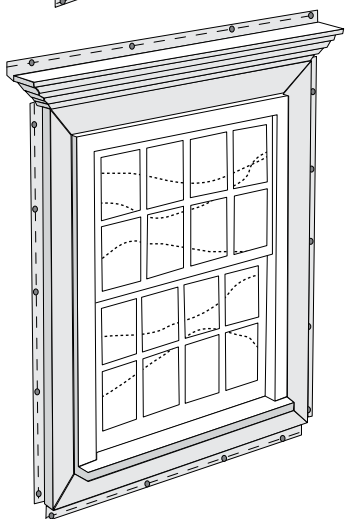


Crown Molding Treatment Options

Option 1 (page 59)

- Crown molding
- Crown molding end caps
- 3/4" Pocket J-channel header and surround

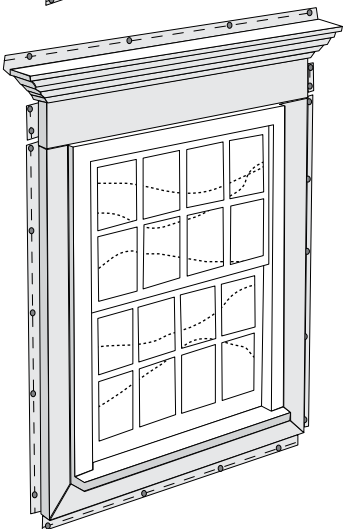
Other options are possible with the crown molding: For example, use 3-1/2" lineals vertically and at the window base along with a J-channel and crown molding header. The only requirement for using the crown molding is having receiving channels 3/4" wide.



Option 2 (page 59)

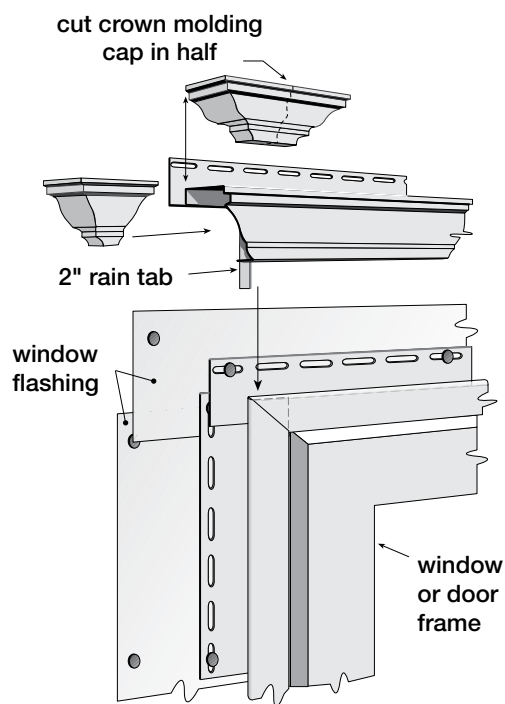
- Crown molding
- Crown molding end caps
- 3-1/2" Lineal header
- 3-1/2" Lineal surrounds

NOTE: *Corner blocks/rosettes can be used to join lineals at the corner.*

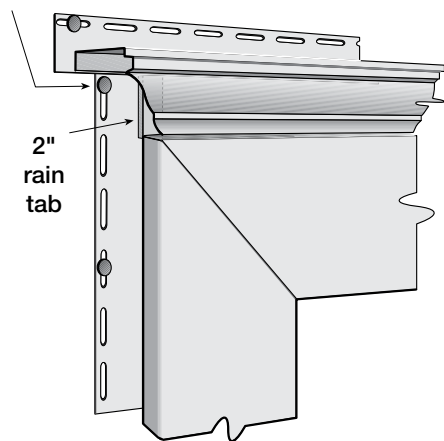


Option 3 (page 60)

- Crown molding
- Crown molding end caps
- 5" Lineal header
- 5" Header end caps
- 3-1/2" Lineal surrounds



insert cap (see above for instructions on assembling the cap)



Crown Molding and Cap for 3/4" Pocket J-Channel

You will need:

- Crown molding
- Crown molding end caps
- 3/4" pocket J-channel header and surround

To use crown molding with 3/4" pocket J-channels, measure the length of the completed J-channel surround and add 2-1/2" (the crown molding overlaps the J-channels by 1-1/4" per side).

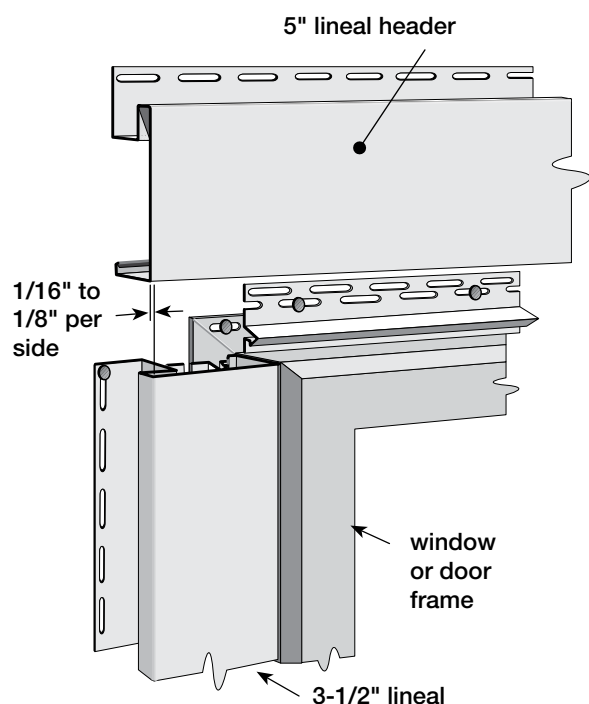
Insert the crown molding cap into the crown molding and trace the tip shape. Trim as shown.

Insert 1/2 of the crown molding cap into each end of the crown molding lineal. Secure the crown molding with a bead of caulk.

Miter or square cut the J-channel (mitered corner is shown). Insert the 3/4" wide rain tab into the receiving channel of the side J-channel.

Crown Molding with 3-1/2" Lineal Surround

In addition to J-channel, crown moldings can also be used with lineals. The next two pages demonstrate how crown molding can be used with various lineal configurations. Above all, remember that before applying accessories and siding, make certain the substrate is watertight. In order to be properly protected from precipitation, the substrate may need to be properly flashed to shed water to the exterior. The siding alone is not a watertight barrier.

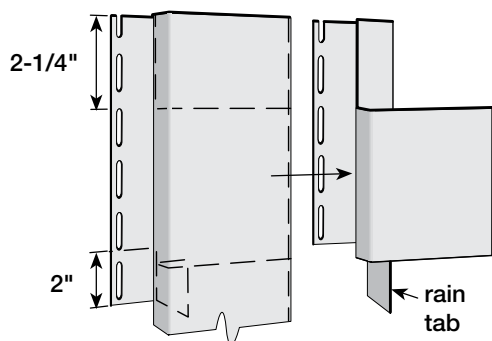


Crown Molding with Cap for 5" Header Lineal

Crown molding with 5" header and 3-1/2" surrounds.

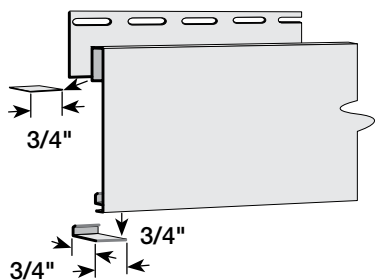
Determine the header length by measuring from the outside of both side lineals and adding 1/16" to 1/8" per side for overlap.

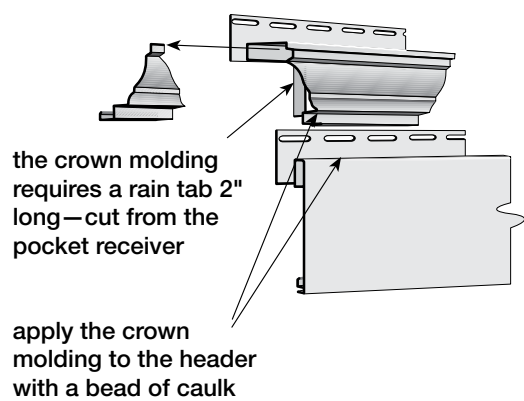
To cut the crown molding, add 2-1/2" to the previously determined header length (1-1/4" added per side).



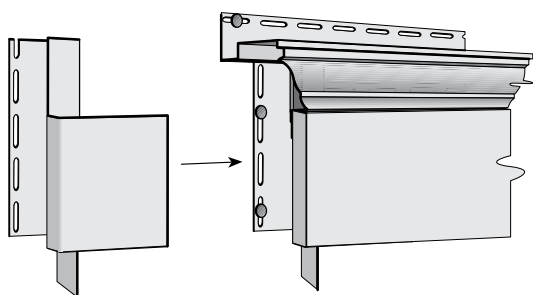
To create the header end cap, cut a 9-1/4" piece of 5" lineal and trim as shown.

Notch both ends of the header as shown.

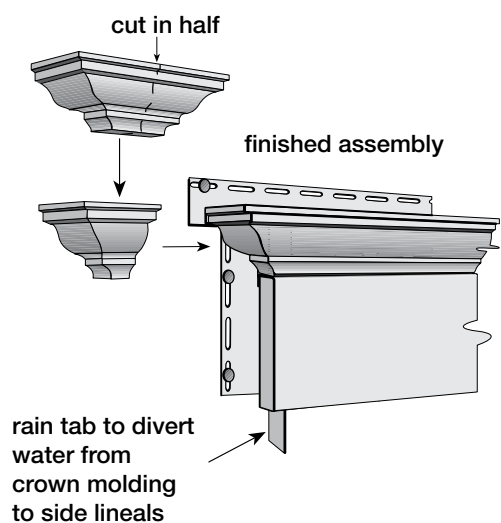




Insert a crown molding cap into the crown molding and trace the shape. Trim as shown.



Insert the header cap.



Cut the crown molding cap in half. Apply each half to the end of the crown molding and secure it with a bead of caulk.

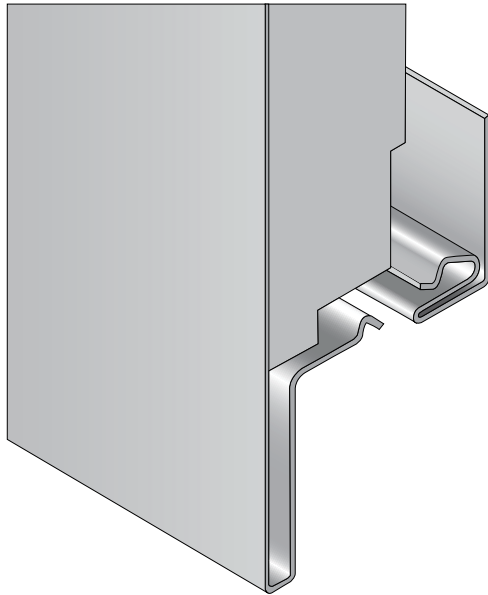
Band Board

Installing Band Board

Before you begin, determine where the last course of siding will end. Nail cornice receiver loosely every 8" to 10", with the nailing fin facing up. Keep the cornice receiver straight as it establishes the line for the Band Board.

Install the last course of siding 1/4" below the cornice receiver. If necessary, trim the top of the siding panel to fit below the cornice receiver. With a nail slot punch, punch nail slots 16" apart, 1/4" from the panel's upper edge. Nail through the center of the holes for a loose fit between the panel surface and the nail heads.

Cut Band Board to length, allowing for clearance between the Band Board ends and the trim for expansion and contraction. Push the snap leg of the Band Board into the cornice receiver. Nail the Band Board loosely every 10" to 12".



nail with fin facing up

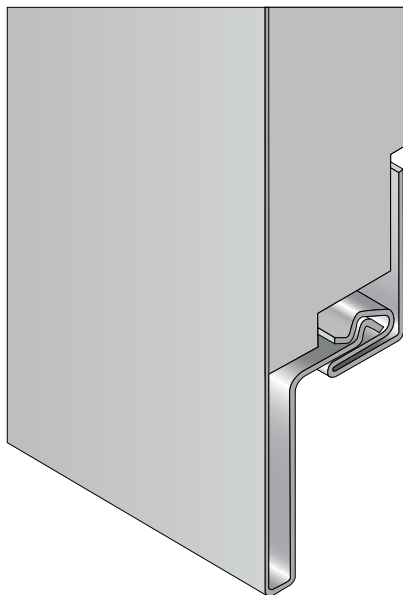
Fitting into trim pieces

The Band Board is designed to fit into 1-1/4" J-channel, pocket corners, and lineal accessories.

For lengths less than 12', allow 1/4" gap between the ends and the trim at temperatures above 40°F; allow 3/8" gap at temperatures below 40°F.

For lengths greater than 12', allow 3/8" gap between the ends and the trim at temperatures above 40°F; allow 1/2" gap at temperatures below 40°F.

When using the Band Board in installations with accessories that DO NOT have a 1-1/4" pocket, be sure to allow clearance between the two pieces for expansion. Trim a short section of Band Board to create an end cap for these applications.



push snap leg of band board into cornice receiver

Installing siding above Band Board

There are two ways to continue siding above the Band Board:

- For horizontal siding, use a starter strip. Position the starter strip above the Band Board enough to allow the siding return leg to engage the starter strip.
- For vertical siding, use J-channel. Align the nail slots of the J-channel with the nail slots of the Band Board.

NOTE: When nailing a starter strip, avoid pinning the Band Board. The Band Board must be allowed to expand and contract freely.

Overlapping two pieces of Band Board

Only factory-cut edges can be used to create a lap seam. The adhesive begins approximately 2" back from the end of the foam.

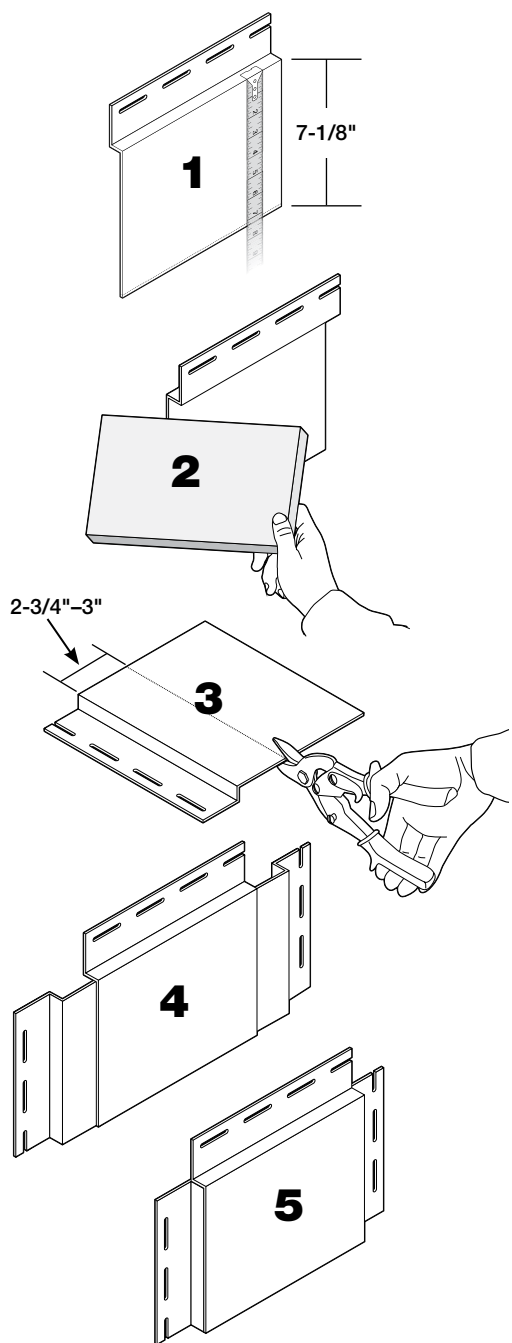
For the underside piece, measure back 1-1/2" from the end of the vinyl. Cut back 1-1/2" of foam and remove the bottom portion of the rear return and snap leg. Slip the vinyl edge of the bottom portion of the seam between the foam and the vinyl panel. Slide two pieces together, overlapping them 1-1/4", leaving a 1/4" gap between the foam for expansion.

Creating end caps for Band Board

To create end caps for Band Board:

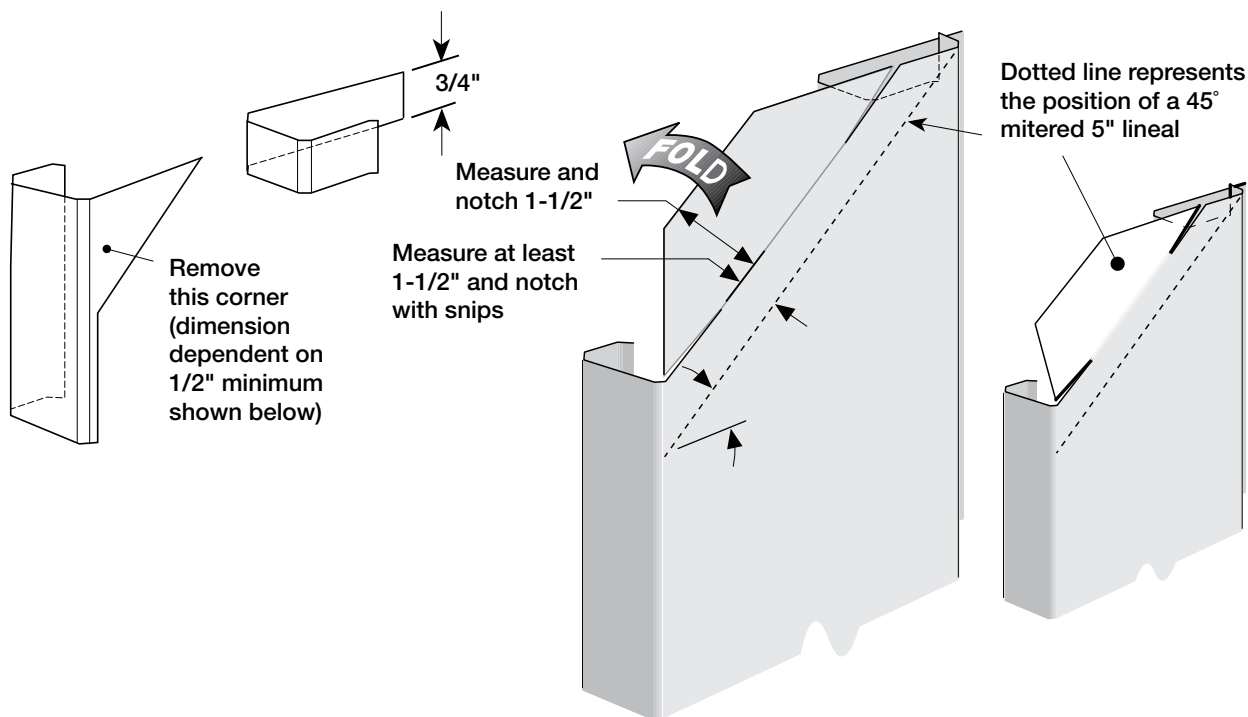
1. Cut 1/8" off the bottom of a piece of Band Board, leaving a piece that is 7-1/8" wide.
2. Remove the foam from the back of the piece.
3. Then, cut the piece down so that it is 2-3/4"-3" wide. The nail hem will be either left or right, as the insert can be used for either side.
4. With the nail hem to the side, insert the cut piece between the foam and the Band Board. This will form a tight fit, but it may be necessary to glue or caulk at the point where the Band Board meets the cut piece.

NOTE: Depending upon the corner system you are using, you may have to trim the nail hem to fit.

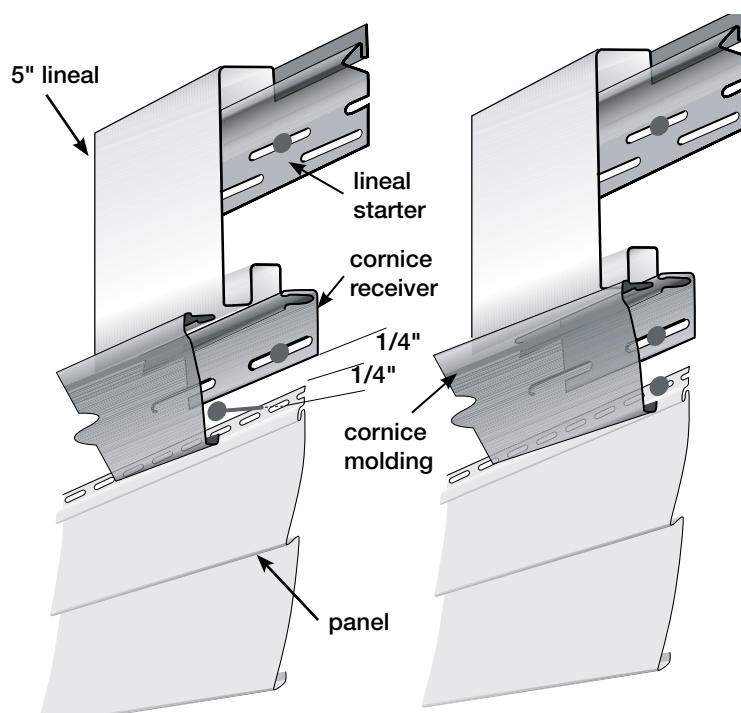


Blind Miter

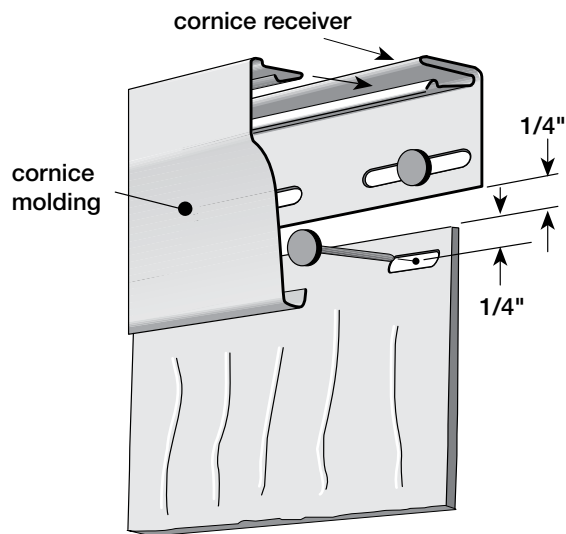
An alternative to a standard blind miter offers support to the corner without adding material. The measurements shown for the fold are for a 5" lineal. The same method can be used with 3-1/2" lineals, but the fold would be changed from 1-1/2" to 1-3/8".



Lineal Frieze Board



Finishing siding with Cornice Molding and Receiver



Finishing the last course of siding with Cornice Molding

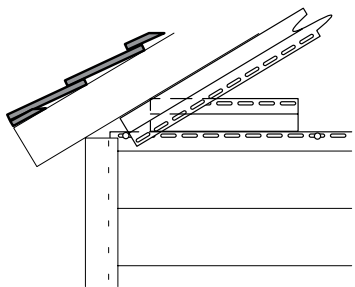
To finish the top course of siding, attach cornice receiver to the top of the wall under the eave or soffit. Trim the top panel to within 1/4" of the cornice receiver. Using a nail slot punch, punch nail slots 1/4" from the trimmed edge, 16" apart. Nail off the top course and snap the cornice molding into the cornice receiver.

Finishing siding in a rake application with Cornice Molding

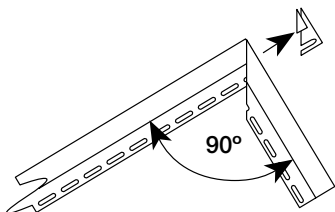
When using cornice molding and receiver in a rake, shimming the receiver away from the wall may minimize rippling of the face. Cut a piece of shim material the full length of the cornice receiver and fasten shim material to the wall. Apply receiver over shim; then finish installing siding product and cornice molding as you normally would.

Installing J-Channel as Gable End Trim

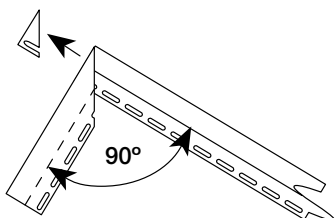
Install J-channel to receive siding at gable ends, as shown in the illustration. To create a clean, professional look, follow these steps:



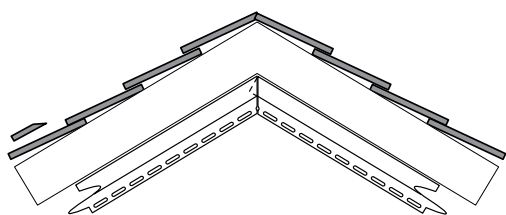
To create an angle template, hold a piece of J-channel against the slope while transferring the angle to another J-channel with a pencil.



Next, transfer the angle of the template to the end of a length of J-channel. Be sure to extend the line onto the nail flange. Cut away the channel face and the nail flange.

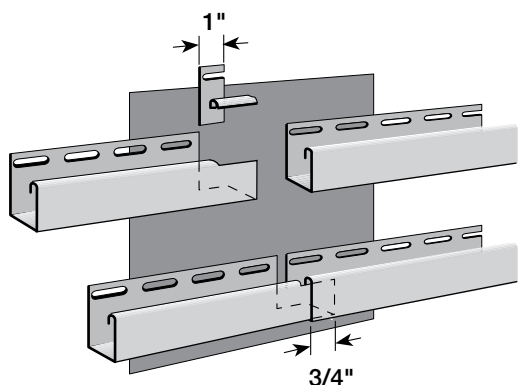


Turn the pattern over and transfer the opposite angle to the second J-channel, being sure to extend the line onto the nail flange. Cut away the nail flange and return lip, but do not cut the J-channel face.



Insert the full-faced J-channel into the mitered J-channel. If the nail flange or return lips butt and prevent a tight fit, trim off additional material from the second J-channel.

NOTE: For a more decorative appearance, you also can use 3-1/2" or 5" lineals to trim gable ends (see next page for details).



To splice the J-channel, follow these steps:

Cut out a 1" section of the nailing flange and face return as shown.

Install inverted J-channel along the top of the wall, under the eave. Here again, leave a 1/4" gap between the J-channel and the cornerposts. Overlap the J-channel 3/4" to allow for expansion. When positioning the upper J-channel, be sure to allow for expansion of the siding panel. In most cases, position the J-channel at a point equal to the length of the panel plus 5/8" (1/4" for upper expansion and 3/8" for lower expansion).

Using Lineals as Gable Trim

You can give gable end trim a more dramatic appearance by using 3-1/2" or 5" lineals instead of J-channel.

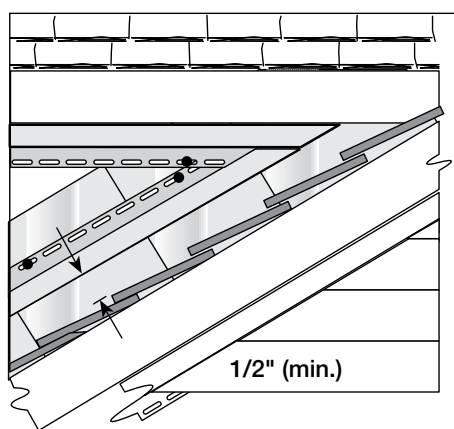
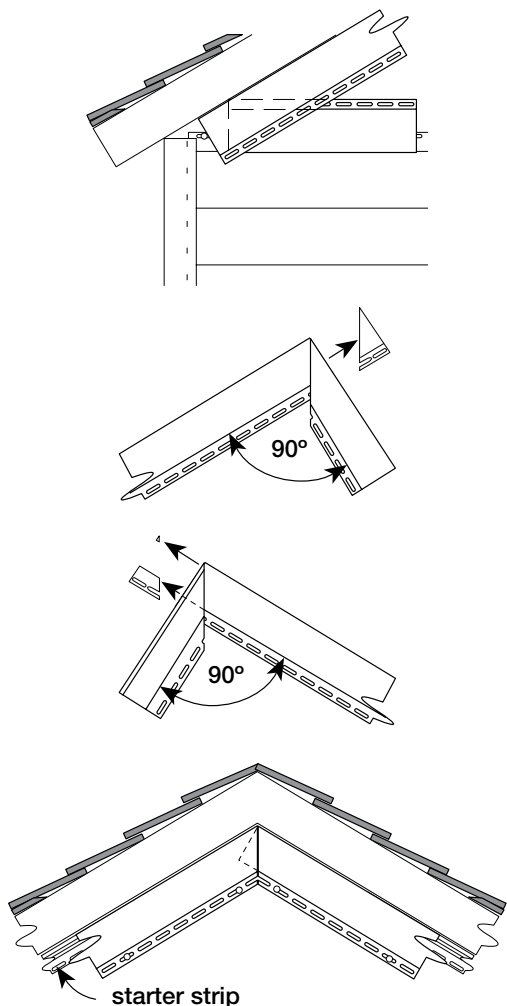
To install the lineals:

Make a pattern duplicating the gable slope. To create an angle template, lock a piece of lineal into the previous course of siding or other gable starter. Hold a second piece of lineal or starter against the slope and transfer the angle with a pencil.

Transfer the angle of the template to the end of a length of lineal. Cut away the lineal face and nail flange.

Turn the pattern over and transfer the opposite angle to the second lineal. Trim the nail flange and receiving channel from the opposite lineal to this line. Do not cut the lineal face.

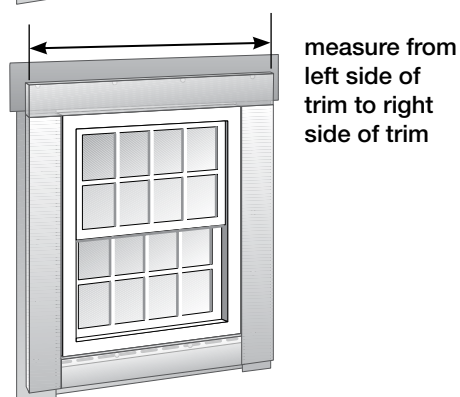
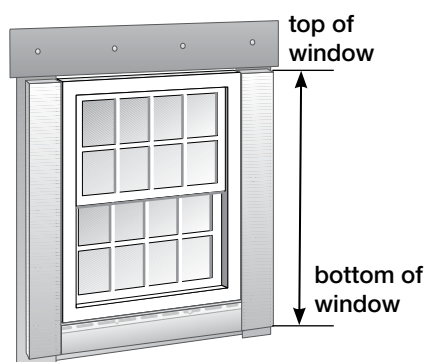
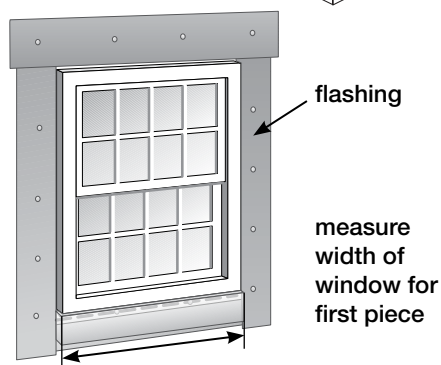
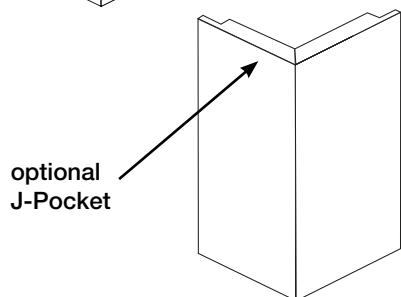
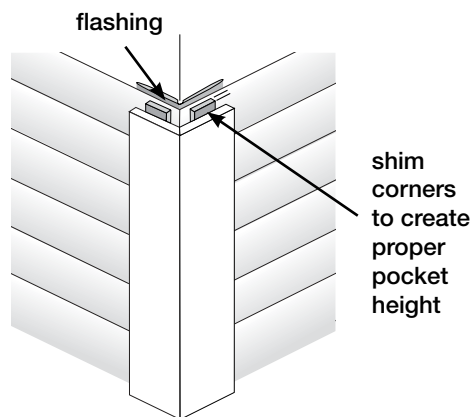
Insert the full-faced lineal into the mitered lineal. If the nail flange or return lips butt and prevent a tight fit, trim off additional material from the second lineal.



Installing trim at roof line

To prevent water infiltration along the intersection of roof and wall, install flashing before installing J-channel. At points where vinyl siding and accessories will meet at a roof line—such as areas where a gable dormer or a second story side wall intersect with the roof—it's best to position the J-channel so it is a minimum of 1/2" away from the roof line. Placing the J-channel directly on the roof line will subject it to a build-up of heat, which could result in excessive expansion.

NOTE: If you use more than one length of J-channel to span a wall surface, be sure to overlap them 3/4".



Using Restoration Millwork® in Place of Vinyl Accessories

Installing outside corners

Flash the corners of the home by bending a 20" wide piece of aluminum trim coil 90° so you have two 10" legs. Cover the entire length of the corner, lapping the upper pieces over the lower pieces. (Self-adhering flashing may be substituted for trim coil. Follow manufacturer's installation instructions and observe local building code requirements.)

Position the outside cornerpost with the top of the post 1/8" from the underside of the eave and the bottom of the cornerpost 3/4" below the starter strip. Make sure posts are straight and true before fastening. For advice regarding fastening, please refer to "Restoration Millwork Installation Guidelines" (RM003), available online or where Restoration Millwork is sold.

NOTE: It may be necessary to shim or furr out the corners and/or window casings to get the proper pocket height. Always use shimming/furring materials, like Restoration Millwork, that will not rot or decay.

Installing Trimboards around windows

Flash the window according to the manufacturer's specifications. Once the opening is properly flashed, begin by measuring the width of the bottom edge of the window and, using this measurement, cut the first section of Restoration Millwork. Apply this piece to the bottom of the window, verifying each end of the section lines up with the edge of the window prior to fastening.

To determine the length of the trim along the sides of the window, measure each side of the window starting at the top of the window and dropping down to the bottom edge of the first piece of millwork applied. Using these measurements, cut the second and third sections of Restoration Millwork. Apply these pieces to the left and right sides of the window, verifying that the top edge of each section lines up with the top of the window and the bottom edge of each section lines up with the bottom edge of the first piece of trim already applied.

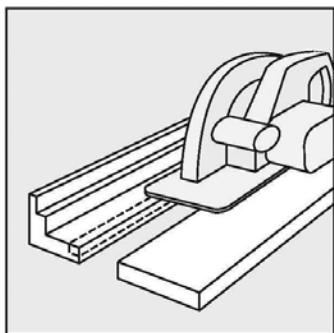
To determine the length of the top piece of trim, begin at the left side of the left piece of trim and measure to the right side of the right piece of trim. This measurement should equal the width of the window plus two times the actual width of the trimboards being applied. Cut the final piece of trim and apply it at the top of the window, again verifying that the left and right edges of the cut section line up with the left and right edges of the trimboards in place at the sides of the window.

Once the top section of millwork is in place, apply flashing in compliance with local building codes.

Installing Trimboards around exterior doors

Flash the door according to the manufacturer's specifications. Once the opening is properly flashed, begin by determining the length of the trim along the sides of the door by measuring each side. Start at the top of the door and drop down to the desired termination point. Using these measurements, cut the second and third sections of Restoration Millwork. Apply these pieces to the left and right sides of the door, verifying that the top edge of each section lines up with the top of the door.

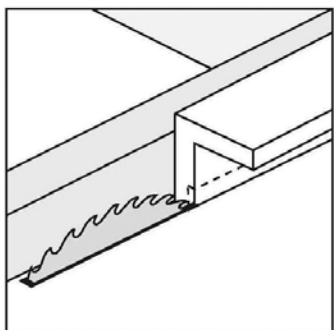
To determine the length of the top piece of trim, begin at the left side of the left piece of trim and measure to the right side of the right piece of trim. This measurement should equal the width of the door plus two times the actual width of the trimboards being applied. Cut the final piece of trim and apply it at the top of the door, again verifying that the left and right edges of the cut section line up with the left and right edges of the trimboards in place at the sides of the door.



Once the top section of millwork is in place, apply flashing in compliance with local building codes.

Occasionally you will need to create a pocket to accommodate a nailing flange:

1. Measure the width of the nailing flange of the window at the opening where you plan to apply the trim.
2. Set the blade depth of your table saw approximately 1/8" higher than the width of the window nailing flange.
3. Set the table saw fence so you are cutting away only the thickness of the saw blade from the trimboard.
4. Make one cut from the back side of the trimboard on your table saw.
5. Check to be sure the trimboard will lay flat against the wall and that all joints are tight before fastening. If the boards do not lay flat against the wall or joints are not tight, repeat the above instructions starting at step 3.

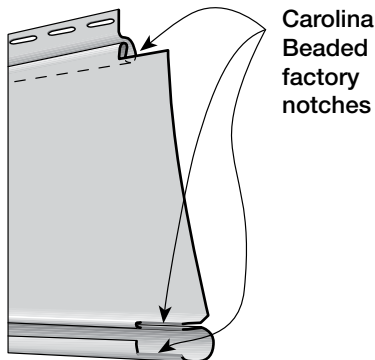
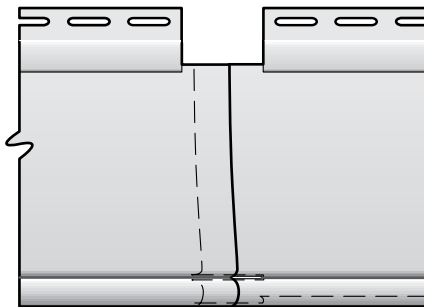
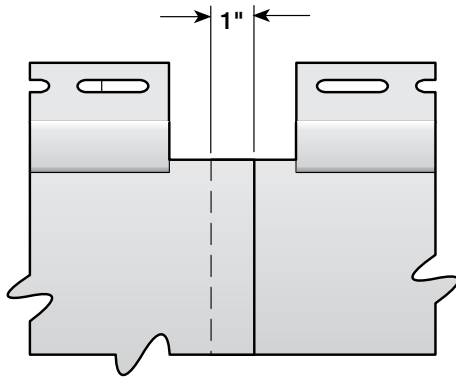
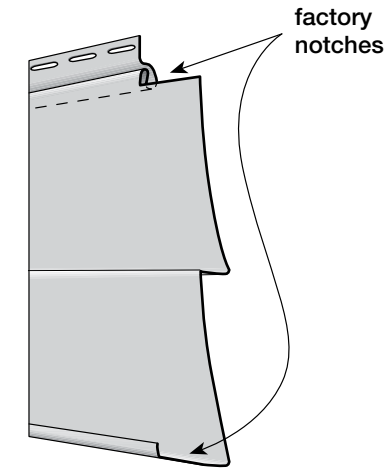


Section 7 — Installing Horizontal Siding

Top Ten Tips for Installing Vinyl Siding

CertainTeed provides quality vinyl siding and accessories that are backed by one of the industry's best warranties. However, even the best products fall short of expectations if they are not installed properly. Following these ten recommendations—the basics of a professional installation—can help ensure a quality installation that fulfills homeowners' expectations and reduces call backs.

1. Install all siding and accessories over a smooth, flat surface. Always install siding over a rigid sheathing, and never install it over open studs.
2. Vinyl siding is not a watertight material. Install a weather-resistant barrier, like CertainTeed CertaWrap, and flash around all windows and doors before installing vinyl siding and trim.
3. There are three recommended ways to cut vinyl siding: For rip cuts, score the panel with a knife or vinyl blade and bend the panel back and forth. Use aviator snips or shears to fit panels around windows and doors. For cross cuts, use a circular saw with a plywood blade in the reverse position.
4. Always leave room for expansion and contraction into receiving channels like outside cornerposts, inside cornerposts, and J-channel. If the temperature is above 40°, leave 1/4"; if the temperature is below 40°, leave 3/8".
5. When installing horizontal vinyl siding panels 12' 6" in length or shorter, overlap the factory notches 1" to 1-1/4" (depending on the temperature).
6. Always nail in the center of the nail slots: 16" on center for siding; 8" to 12" for accessories.
7. DO NOT NAIL TIGHT! Always leave 1/8" to 1/16" between the nail head and the wall surface to allow for movement when the panel expands and contracts.
8. Hang vertical accessories from the top of the top nail slot. If the accessory is longer than 12', hang it from the top two nail slots.
9. Lap away from the highest traffic pattern, typically the front of the house. Keep laps at least 3' apart from course to course, and install three courses between laps above each other.
10. Finish the last piece of siding into utility trim or dual utility trim.



Cutting Panels

To cut panels to size, follow these procedures:

Cross cuts

For a precise cut, use a power circular saw equipped with a sharp, fine-tooth plywood blade. For best results, reverse blade direction.

Cut one or two panels at a time, carefully advancing the saw through the vinyl. A rule of thumb: The lower the temperature, the slower the feed rate.

Panels can also be cut with snips. Use a square to mark the cut line. Start the cut at the top lock and continue to the bottom of the panel.

Rip cuts

Use a utility knife to score the panel along the cut line. Bend the panel back and forth along the score line until it snaps apart cleanly.

Use a combination of tin snips and utility knife to cut panels to fit around windows and doors.

Overlapping Panels

Refer to the chart on page 35/36 for required overlap spacing.

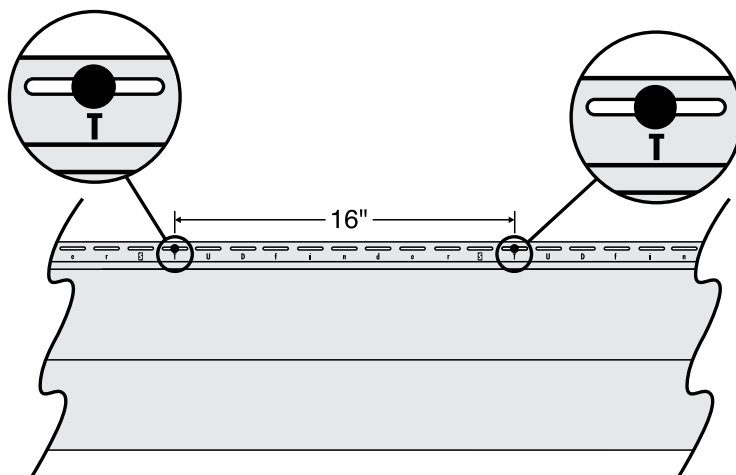
NOTE: Whenever you cut a panel to be used in an overlap area, you also have to duplicate the factory notch at both the top and bottom of the cut end.

NOTE: The Carolina Beaded panel is factory-notched in three places. For best results, overlap panels using factory notched ends only. If a panel must be cut on site, insert cut ends into receiving channels in cornerposts or J-channel. If this isn't possible, create an exact duplicate of notches using aviation or tin snips.

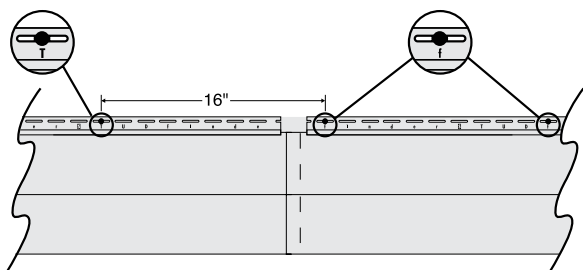
STUDfinder Installation System for 12' Panels

The STUDfinder™ Installation System combines precisely engineered nail slot locations with graphics to help ensure quick, accurate and secure installation of CertainTeed siding panels on homes with standard 16" or 24" o.c. frame construction.

NOTE: In areas without special wind-load requirements, some vinyl siding may be used in 24" o.c. construction. Check with your local building code official for special requirements and ICC-ES Evaluation Report ESR-1066 for special wind-load requirements.



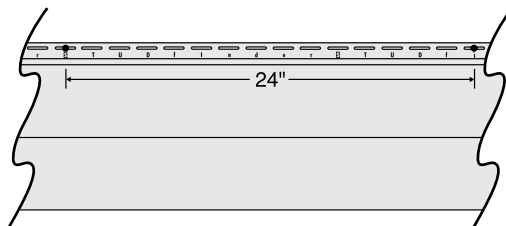
Standard 12' panels feature 10 nail slots every 16", with one of the 10 letters in the word "STUDfinder" centered directly under each slot. Locate the first stud and fasten the siding to it in the center of the nail slot. Ensure that nail/staple penetration is at least 3/4" to comply with ASTM D4756 (specification for vinyl siding installation). Notice which STUDfinder letter appears below the slot.



Go to the next repeat of the letter to find the next stud. For example, if your first stud is at "T," succeeding studs in 16" o.c. applications will also be at "T" (every 10th slot).

When you apply the next panel, adjust the overlap as necessary to line up with studs and repeat the steps above, but be aware that the overlapping panels may not use the same letter as your initial panel.

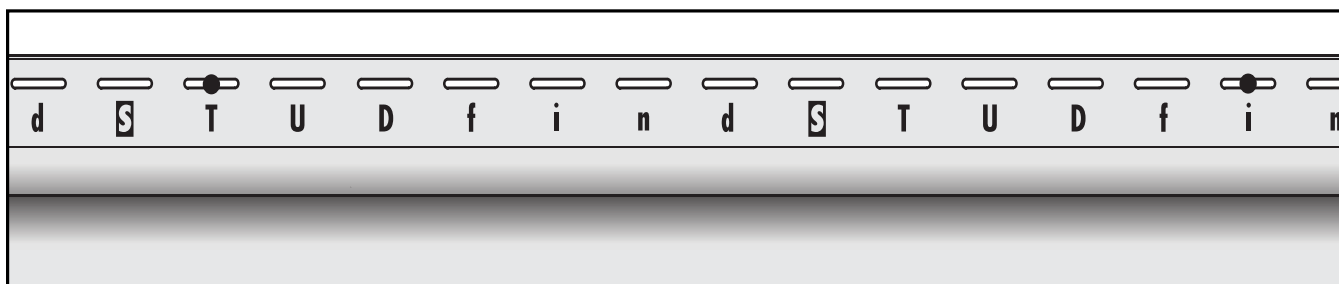
In 24" o.c. applications with standard size siding panels, 2 letters will repeat every other stud (every 15th slot). For example, if the first stud is located at "S," then the next will be at "i," then "S," then "i," etc.



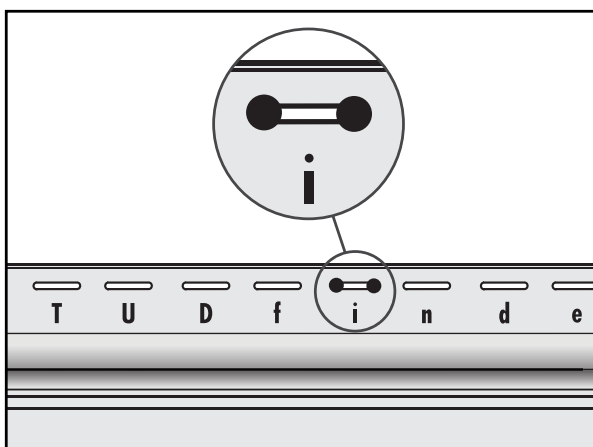
STUDfinder Installation System for Oversized (16', 16' 8", 20' and 25') Panels

CertainTeed's longer siding panels – 16'8" CedarBoards XL, 16' and 20' Monogram 46L and 25' Monogram 46XL – feature 8 nail slots every 16", with one of the 8 letters of the word "STUDfind" centered directly under each slot. In 16" o.c. applications, locate the first stud and follow the same basic procedure described for standard size panels: note which STUDfind letter appears below the first nail slot and go to the repeat of that letter to find the next succeeding stud (every 8th slot).

When installing longer Monogram or CedarBoard panels on 24" centers, the succeeding studs are at every 12th slot; for example, if you start at "T," then the next will be at "i," then "T," then "i," etc.



NOTE: Monogram XL 25' panels must be "center pinned" to control expansion and contraction. To do so, locate the center nailing slot of the panel and drive nails into both ends of the slot (see illustration). This is only done for one nail slot per panel.

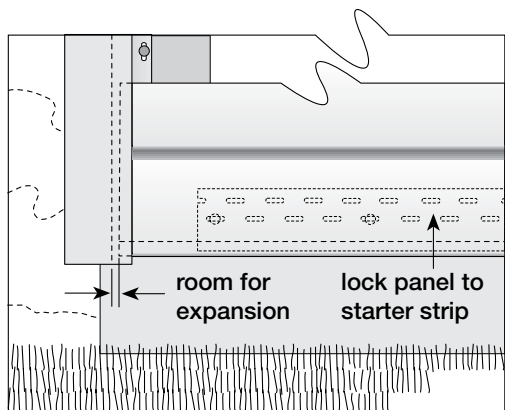


NOTE: Ensure that nail/staple penetration is at least 3/4" to comply with ASTM D4756 (specification for vinyl siding installation). Also be sure to allow 3/8" for expansion and contraction between panel ends and trim when install temperature is greater than 40° F, and 1/2" for expansion and contraction between panel ends and trim when install temperature is less than 40° F.

Preparing Wall Surfaces

The key to successful vinyl siding application is proper preparation of the nailing surface. It is essential that you work over a smooth nailing surface. The more level and even the wall surface, the better the finished installation will look.

The steps involved in preparation differ for new homes and old, so choose the instructions (page 28 to 33) that pertain to your project.



Installing the first course

It's important to work with care and planning as you install siding panels. This is especially true when you're installing the first course of siding. (See pages 33 to 35 for fastening methods.)

For best results, follow these guidelines:

The key to creating a visually attractive installation is to lap away from areas where people normally walk or gather. For example, on the front wall, work from the corners to the entrance door (so overlaps face away from door).

On side walls, work from the rear corners toward the front. This approach minimizes the effect of lapping and produces the best appearance. Keep lap appearance in mind throughout installation.

NOTE: Lap appearance is also improved when you avoid using panels less than 3' long.

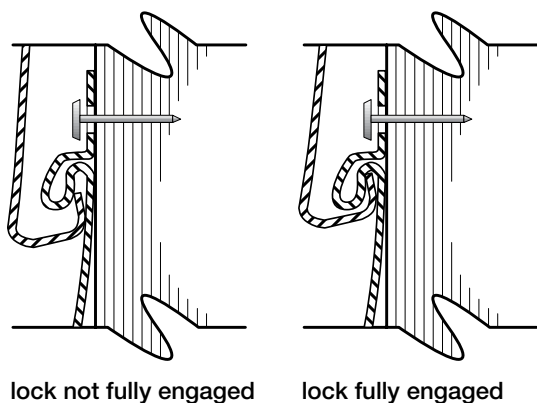
Slide the first panel into the cornerpost recess. Leave room for expansion (see page 35-36 for spacing requirements).

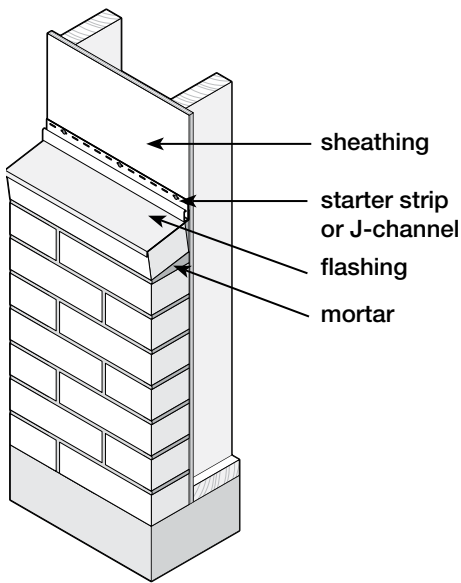
Hook the bottom lock of the panel into the interlock bead of the starter strip by applying upward pressure.

Before nailing, double check to make certain you've locked the panel along its entire length. A slight upward pressure may be required to snap the interlock securely. Don't force the lock too tightly, however. You may distort your laps. Nail properly. Also, make certain the panel can slide freely. Start at the center of the panel and work out.

Install the remaining starter course panels, overlapping panel ends (see pages 35-36 for overlapping requirements). The last nail should be at least 4" from the end of the panel to allow for a neat lap.

Remember to leave room for expansion when fitting panels into remaining inside and outside cornerposts.





Transitioning from brick, stone, or stucco to vinyl siding

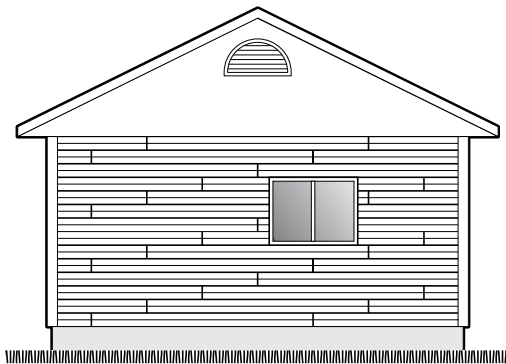
To transition from brick, stone, or stucco to vinyl siding:

- Caulk where the sheathing meets the brick, stone, or stucco. Caulk the flashing, and make sure a drip cap is in place.
- Use J-channel or starter strip to receive the siding when installing horizontal siding. If you use starter strip, leave 3/8" clearance so that the siding can engage securely.
- When installing vertical siding, use J-channel to receive the siding.

Installing remaining courses

To ensure best appearance, position the laps to avoid unsightly joint patterns. The illustration at left shows a well-planned staggering of panel joints. Follow these guidelines:

- Separate joints by at least two courses.
- Avoid joints above and below windows.
- Leave at least 3' separating joints on successive courses.
- Use short cutoff lengths for fitting at narrow openings between windows.
- Follow the planned pattern when applying the next courses of siding.



Fitting under windows

You'll probably have to cut panels to fit under windows.

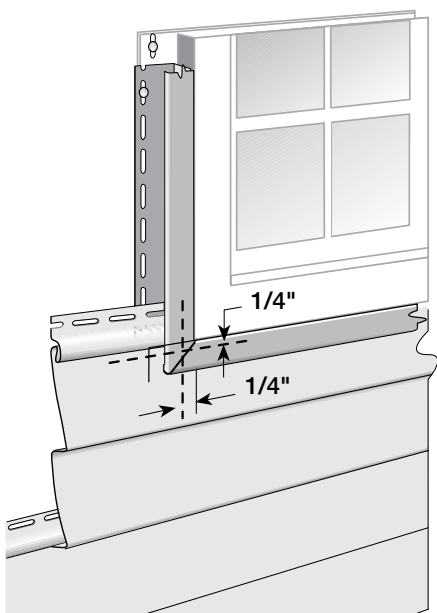
To make this task easier, plan panel positioning as shown at left so a single panel extends beyond both sides of window opening. Follow these steps to measure and cut panels:

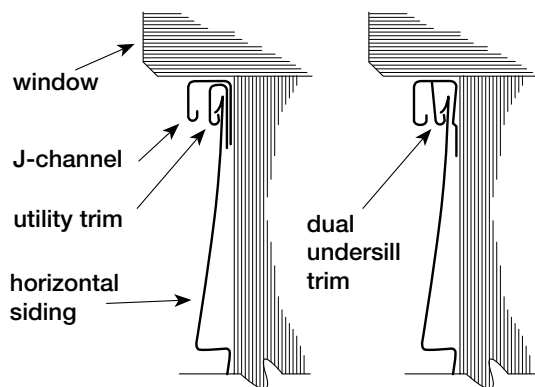
Hold the panel in place and mark the width of the window opening. Add 1/4"–3/8" to both ends to allow for expansion. The resulting marks show the location of vertical cuts. Extend the marks onto the panel using a square.

Create a template for the horizontal cut using a small piece of scrap siding. Lock this piece into the lower panel and mark 1/4" below the sill height. This provides clearance for undersill trim. Repeat the procedure on the opposite side of the window. (You can't assume windows will be perfectly level.)

Transfer the marks from the template to the panel. Connect marks using a straightedge.

Cut the panel, using tin snips to make vertical cuts and a utility knife to make the horizontal cut.





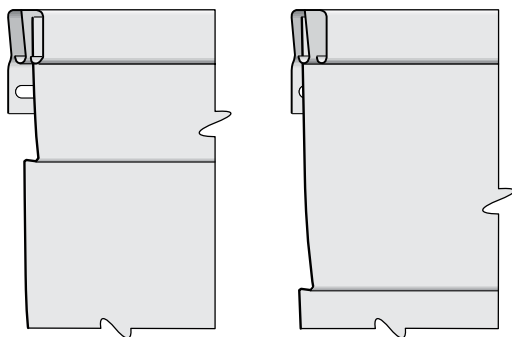
Install panel

If necessary to maintain the slope angle, install furring under the sill as described on pages 31 to 32.

NOTE: You can eliminate this step by using dual undersill trim. This trim has two receiving channels. Use the inner channel if you've cut the siding panel near the locking edge. Use the outer channel if the cut has been made near the butt edge.

Use a snap lock punch to raise tab faces on the outside of the panel. Punch out a tab every 6".

Push the horizontal edge of the cut into utility trim. Slide vertical edges of cut into J-channels at window sides. Make certain the installed panel locks into the panel below.



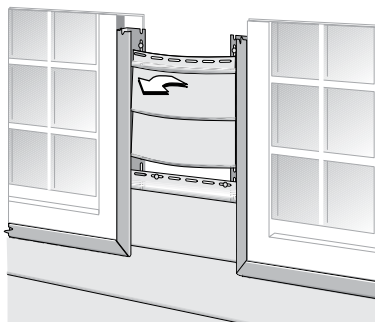
installing trimmed panels
with dual undersill trim

Fitting over windows and doors

The procedure for cutting panels for installation over windows and doors is similar to that explained earlier.

If necessary to maintain the slope angle, install furring above the window or door as explained on pages 31 to 32.

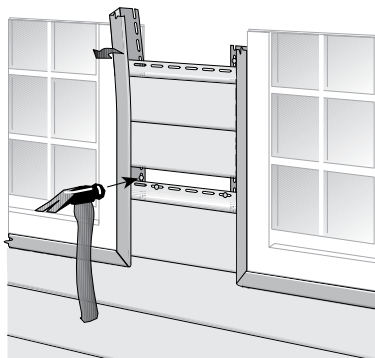
Drop the panel into position, making certain it fits into the undersill trim and J-channel at the top and J-channel at the sides. Interlock the panel with the siding panels below.



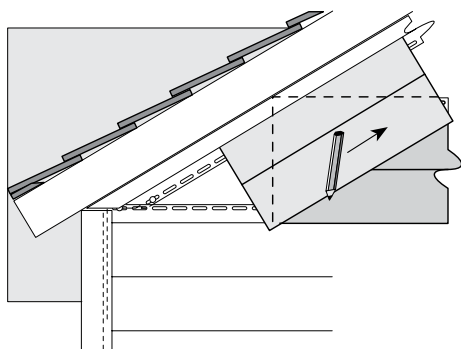
Fitting at narrow openings between windows

To simplify installation in areas such as that shown in the illustration, install J-channel on both sides of opening.

Bow the panel toward you and slip it into the channel.



If the area is very narrow, leave one J-channel unnailed except at the lowest point (as shown). Bend this channel out slightly to insert panel. When the panel is in place and nailed, nail the J-channel immediately above the panel and repeat the procedure. Be sure to leave adequate tolerances for expansion and contraction.



Fitting at gable ends

Make a pattern duplicating the gable slope. Use this pattern to guide the cutting of panels to fit gable ends.

To make pattern:

Lock a short piece of siding into the panel gable starter course as shown in the illustration.

Hold a second piece of siding against the J-channel at the slope.

Run a pencil along edge of this piece, transferring the slope angle to the first piece of siding.

Cut along the line using a power saw or tin snips. Use the resulting pattern to mark siding panels before cutting.

NOTE: Double-check the angle on the pattern at every course. If necessary, cut a new pattern.

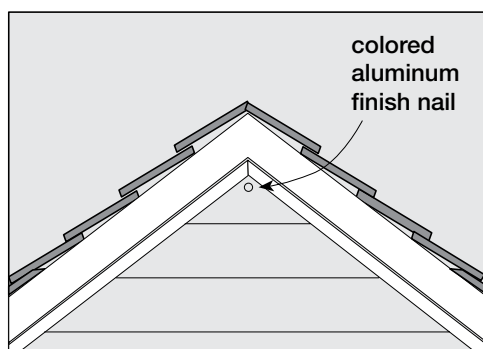
To install cut panels:

Slip the angled end of the panel into J-channel along the gable edge. Leave space for expansion.

Interlock with the siding panel below.

If necessary to securely fasten the last panel at the gable peak, face nail as shown in illustration. This is the only place you will face nail. Use a 1-1/4" to 1-1/2" aluminum nail with painted head.

NOTE: Do not cover louvers in gables.



Fitting under soffit

When you reach the last course of siding, you will probably have to rip cut panels lengthwise to fit under soffit.

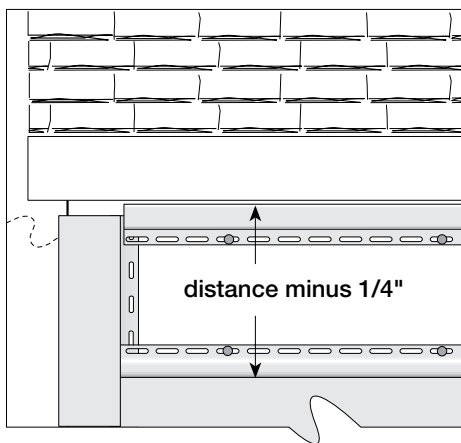
NOTE: If necessary to ensure proper panel slope angle, make certain to furr out this area.

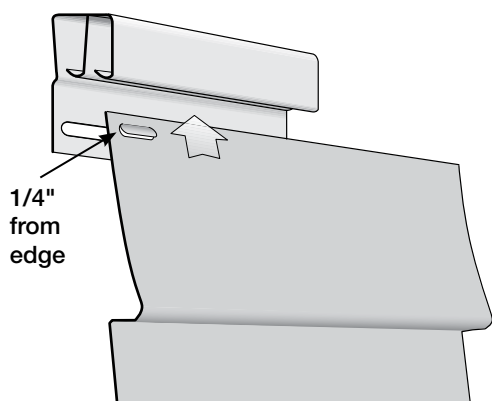
To cut and install this last course:

Install J-channel and undersill trim or dual undersill trim.

Measure from the soffit to the base of upper lock on the previous course of panels. Subtract 1/4". Mark this dimension on the panel to be cut, taking the measurement from the bottom edge of panel. For a more precise cut, repeat this procedure at several other points along the span to be covered by the panel.

Using a square or straightedge, draw a pencil line connecting these points. Then score along the line with a utility knife. Bend the panel back and forth until it snaps. Use a snap lock punch to create tabs on the outside face of the panel, 1/4" below the cut edge. Space tabs every 6".



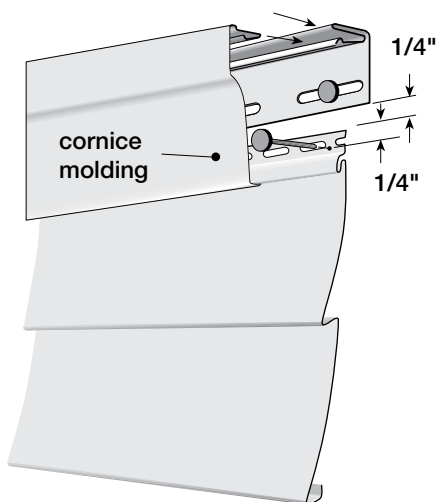


To install, lock the bottom of the cut panel into the panel below. Push the top edge into J-channel or undersill trim. Tabs will catch in the trim and hold the panel firmly in place.

NOTE: Since you will not nail this last course, it is important that the tabs fit properly in the trim to provide support while allowing movement for expansion.

Finishing the top course

To finish the top course of siding, attach cornice receiver to the top of the wall under the eave or soffit. Trim the top panel to within 1/4" of the cornice receiver. Using a nail slot punch, punch nail slots 1/4" from the trimmed edge of the siding panel, 16" apart. Nail off the top course, and snap the cornice molding into the cornice receiver. An alternate method is to use J-channel and furring strips.



Completion

Attaching objects to siding

All external products (downspouts, shutters, and lights, for example) are attached to walls after you've applied the vinyl siding.

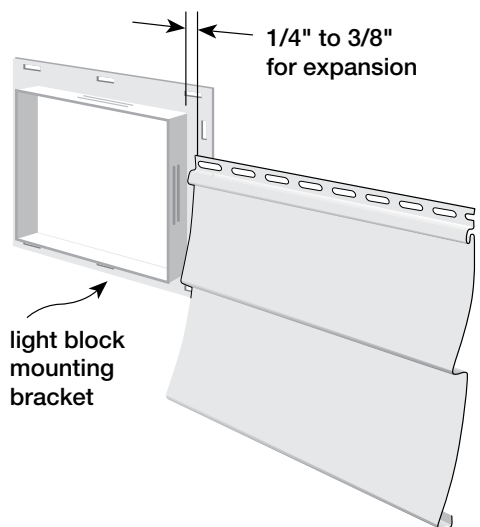
NOTE: All external fixtures must be attached to a solid backing (such as 3/4" exterior grade plywood) to provide a secure mounting surface. Never attach a fixture directly to vinyl siding.

When installing external products, you must allow for expansion and contraction of siding.

You can allow for this movement in two ways:

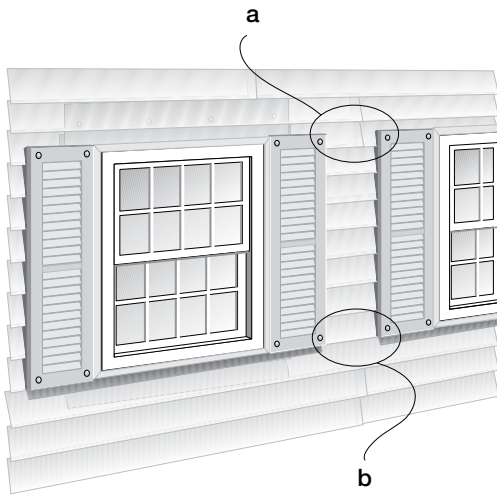
The most convenient way to attach light fixtures is with light blocks. Because they contain receiving channels to hold siding panels, light blocks provide a simple way to allow for expansion.

When attaching other fixtures, drill holes in the siding 1/4" larger than the diameter of screws, bolts, or nails being used to fasten objects. This provides adequate clearance so the siding can move freely underneath attached objects. When attaching objects, do not fasten tightly. It is also recommended that you apply caulk around the screws.



Fitting at light blocks

When cutting panels to fit at a light block, be sure to allow for expansion.



Shutter Installation

The ideal application (a) has a joint between the two shutters where the shutters are secured to the home. In this way, the siding panel is not “hard nailed” between the two shutters and the siding is allowed free movement.

When there is no joint between the shutters and when the shutters are secured to the home (b), the shutters’ fasteners do not allow the siding panel to move. The siding panel then fails to perform because it cannot expand or contract with the temperature changes.

To prevent this, enlarge the holes in the siding for securing the shutter—the hole should be 1/4" larger than the shank of the fastener.

If possible, stagger the screws securing the shutter so that they do not line up on the same panel. It is also a good idea to apply caulk around the screws.

NOTE: See page 76 for fitting siding into narrow openings.