StreamLine™ STANDING SEAM

TAYLOR
METAL PRODUCTS
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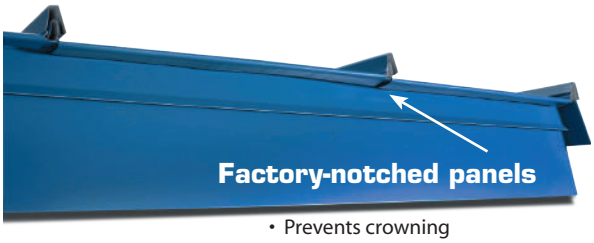
Rev. 1/17

TAYLOR METAL PRODUCTS

StreamLine™ STANDING SEAM

The StreamLine™ Standing Seam is the only metal roofing panel with a patented no-siphon dry lock seam, with a unique reversing feature to allow installation of panels from both directions starting at any location. The panel is designed with softer, less industrial lines to provide an architecturally pleasing appearance.



- Prevents crowning
- No visible screws required
- Sharp, professional appearance

Key Features

- 16˝ coverage
- 26 Tru-Gauge™
- Factory-notched panels available
- Vertical interlocking application: allows installation from both directions starting at any location
- Patented no-siphon lock seam
- 1⅛˝ vertical rib with ⅜˝ flat top for ease of flashing attachment
- Concealed fasteners: fasteners cannot leak
- Pre-slotted fastener flange: allows expansion/contraction of panel
- UL580 Class 90 wind uplift
- UL Class A fire rated
- 3:12 minimum pitch recommended: for lower pitches please inquire
- Standard panel lengths 2' to 35': for longer panels, please inquire
- Pan options: Flat pan, Accent ribs, Striations

Panel Profiles

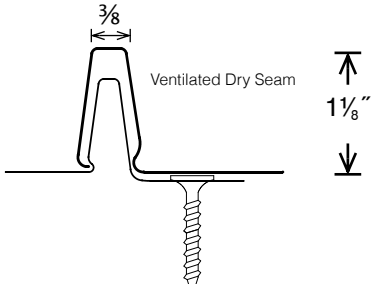
Flat Pan

16˝ coverage

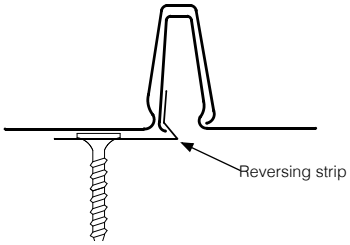
Accent Ribs

Striated

Lock Seam Detail



Reverse Lap Deta



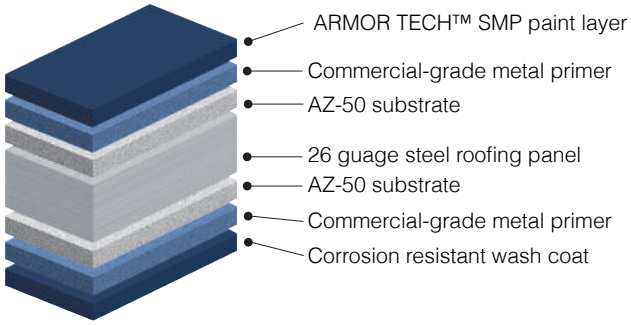
Material Specifications

- 26 gauge ARMOR TECH™ SMP Painted Steel .019˝ (thickness prior to painting) AZ-50 Substrate
- 26 gauge bare Zincalume® Plus with Clear Acrylic Coating AZ-55

Standard Weight				
Width	Gauge	Color	LBS SQFT	LBS LF
16˝	26	ArmorTech	1.13	1.13

Key Features

- 15 Standard Colors
- ARMOR TECH™ Paint System-the ultimate in exterior durabiity
- "Cool" color pigments are specially designed to reflect infrared light, reducing heat gain to dwelling, and conform with ENERGY STAR® criteria
- Superior quality, two coat SMP resin system at 1.1 mils
- 40-year residential paint warranty
  - fading
  - chalking
  - chipping
  - cracking
  - peeling



Standard Cool ARMOR TECH™ SMP Colors

40-Year Residential Manufacturer's Limited Warranty

These printed chips provide a close representation of the colors. Metal samples are available upon request. Coatings are low gloss 10-15% sheen.

Oil canning" is an inherent characteristic of Roof & Wall products, not a defect, and is not a cause for panel rejection.
SRI = Solar Reflective Index. SRI values listed above are in accordance with ASTM E 1980 and are based on actual testing.

steelscape PPG ENERGY STAR CRRC MEMBER

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Taylor Metal Products StreamLine™ Standing Seam roofing product is designed for residential and light commercial applications, however it is not limited to these uses.

The StreamLine™ Standing Seam concealed fastener roofing system is an architectural roofing system and is designed to be weather tight, attractive, easy to install and to provide long life.

These installation instructions are intended to offer suggested application procedures for common building construction. No attempt is made to provide installation details for every application or possible use.

Please contact Taylor Metal Products for use of custom flashing details as they pertain to specific conditions or to discuss a specific project.

Conformity to local building codes, details for specific applications, and use of safety and health procedures is the sole responsibility of the installer.

Taylor Metal Products assumes no liability for the improper installation of the StreamLine™ panel nor for any personal injury or property damage that may occur with the product's use.

Oil Canning – All light gauge metals can display waviness often referred to as "oil canning." This is caused by steel mill tolerances, substrate variation and relative reflectivity. "Oil canning" is an inherent characteristic of steel products, not a defect, and is not a cause for material rejection.

Delivery and Will Call

Delivery Policy

Taylor Metal Products delivers using diesel trucks with 5th wheel flat bed trailers. Overall combined length can be as long as 65 feet. Our fleet includes trucks, with and without knuckle cranes, and a variety of trailer sizes to assist in deliveries. We will make every effort to accommodate requests for a specific delivery mechanism, but we can not guarantee availability of specific resources.

We will make every attempt to deliver material to the desired location. We may be unable to gain access on tight corners or steep terrain. If the site is deemed inaccessible by our driver, the customer may choose an alternate delivery site within a reasonable proximity. If we are unable to make the delivery, additional charges may be assessed.

The customer is responsible for:

- Determining adequate access for delivery ahead of time.
- Meeting the delivery at the agreed upon time.
- Any balance owing on C.O.D invoices.
- Providing adequate resources (1-4 people as needed) for off-loading materials.
- $35 per half hour charge if delivery takes longer than one-hour.

Delivery times are usually scheduled one day in advance. Taylor Metal Products will make every effort to make the delivery at the scheduled time. Please be aware that there may be conditions beyond our control such as traffic, mechanical failure, road closures, etc. which may affect our schedule.

Will Call and Loading Policies

Flat bed trailers and trucks are best suited to transport metal roofing materials. These can be loaded from the side with a forklift and tied down in a safe and secure manner.

We are not able to load materials onto vehicles and/or trailers which are not suitable or may be hazardous to load. Please be aware that if we find a vehicle to be inappropriate, we reserve the right to refuse to load your order.

> Examples are: boat trailers, vans, buses, motor homes, campers and box trailers. Pickup racks which do not have sufficient supports for the weight or are not long enough to support bundles are also unacceptable.

Taylor Metal Products is not responsible to tie down loads nor do we provide any tie down materials. Please bring tie downs to secure your load (string or twine are not acceptable for this purpose.) We do offer a delivery service at reasonable rates to accommodate the customer who needs the materials delivered to an accessible job-site.

Please see our delivery pricing pages for more information.

Check the shipment at the time of delivery.

Verify material quantities against the shipping/packing list. Note any damage or discrepancies upon the paper work at the time of delivery and notify TMP within 48 hours of delivery.

Handle materials with care when off loading or moving materials to avoid damage to panels or flashings. Long panels may require two or more pick-up points, properly spaced to avoid damaging panels. Plan ahead. Contact TMP for recommendations on handling/hoisting long panels.

Store the panels, flashings, and accessories in a dry, well ventilated area, off the ground. If covering, allow ventilation around the panels. Elevate one end of bundles to allow drainage of wet materials.

Painted metal roofing panels will have a clear plastic film applied to the lower rib of the panel to protect the seam during transportation and handling. Flashing and flat sheet may have a plastic film for protection. Remove this film prior to installation of the panels. Products with film should not be stored in direct sunlight, and should not be left in hot weather for long periods.

Wear clean cotton gloves when handling copper or unpainted Galvalume to avoid leaving fingerprints and smudges. While finger-prints or smudges will not harm the material, they will temporarily leave markings on the material until the material weathers.

Wear clean, soft-soled shoes when walking on roofing panels to avoid damage to the painted finish. Take care that sand, gravel, dirt etc. sticking to your shoes is not carried onto the roof, scratching or otherwise damaging the finish on the roofing material. Walking on asphalt impregnated felt paper, especially on a hot day, can cause the asphalt to stick to your shoes and be tracked on to the roofing material.

Take care when painting to avoid getting over spray on the roofing material. Remember that wind can carry paint particles some distance. Over spray can cause the finish of the roofing material to look dull and may void your warranty.

Secure materials, especially when leaving the site, on the ground or roof to prevent winds from moving the materials. Wind blown materials may cause damage to the material, property or persons.

Safety considerations are the responsibility of the installer and his crew. Be sure to **use common sense** and generally accepted safety practices when installing roofing materials.

Tools

The following tools may be used for proper installation.

- Screw Gun: Clutch type, variable torque, cordless screw guns will give the best results.
  - Extra batteries
  - Bit holder - magnetic
  - #2 square drive bits (for panel screws)
  - 1/4" Hex head - magnetic - bit driver (for woodfast flashing screws)
  - 1/8" drill bit (for rivets & pre-drilling fastener holes)
  - Belt & holster (keeps all the above tools safely on your hip)

- Cutting Tools:
  - Cutters/Offset (curved jaw) left & right (for precision cutting, long cuts
  - Snips (straight jaw) left & right (for short cuts & circular cuts)
  - Hack Saw - 32 TPI Blade (provides best results for cutting roll-formed ribs on panels)
  - Circular & Sabre saws (with metal cutting blades speeds up panel cutting but leaves very rough edges and burrs paint)
  - CAUTION: POWER SAWS MAY CAUSE PANEL DAMAGE!
  - Electric Shears (aids in long panel rips)
  - DeBurring Tool

  WARNING - Filings, debris and chips must be wiped off panels, otherwise rust will develop!

- Hole Punch (for pre-punching holes in metal)

- Rubber Mallet - Soft Type (for adjusting panels & flashings)

- Quick Square, Framing Square & Bevel Square (aids in squaring flashings & panels)

- Duck Bill Vise Grips/Pliers (for various bending)

- Upender Tools (used for panel-prep, available at TMP)

- Tape Measures - 16' for most work - larger sizes for larger surface & panel measurements

- Rivet Tool (for riveting flashings)

- Marking pen or grease pencil

- Chalk Line (for marking long panel rips and to align panels)

- Protective gloves to protect hands

- Cotton gloves for working with copper (to protect against fingerprints on finish)

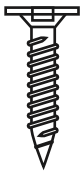
Fastening Frequency

TMP panels have a slotted screw flange with slots about every 12". TMP recommends placing a fastener in the center of each slot for the best wind resistance. (Note: Slots are not in identical locations on each panel.) Fasteners should be of sufficient length to penetrate the sheathing fully or into solid lumber 1".
Screw down panels firmly but do not over tighten. On those occasions where you cannot use the slot, fasten through the flange of the panel. Screw spacing when not using the slots is:

- 10" to 12" for 3/8" plywood (note- 3/8" plywood is not recommended)
- 12" to 14" for 1/2" plywood
- 18" to 20" for 5/8" plywood
- 24" for solid decking

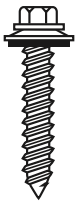
Fasteners

TMP recommends the following fasteners for 26ga and 24ga galvanized steel StreamLine™



Waferhead, Sharp point
Sizes:
#9-16 x 1" #2 Phillips Drive (also available in #2 Square Drive)
#9-16 x 1-1/2" #2 Square Drive
Waferhead screws are recommended for attaching the panels to a wood deck or substrate. They are concealed fasteners and made of carbon steel coated with Zinc and an Oxyseal/Xylon Coating for long life.

Lathhead Screws, Sharp Point
Size: #6 x 9/16"
Lathhead screws are used to attach the panels to the wood deck. While generally not recommended for most applications, this concealed fastener is useful for areas where a longer fastener will penetrate the substrate and exhibit an objectionable appearance, such as exposed overhangs. The pull out rating for this fastener is less than the waferhead, so these fasteners need to be placed more often.

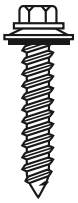


Woodfast, Sharp Point
Sizes:
#9-16 x I" 1/4" Hex Drive- Color Match
#9-16 X 1-1/2" 1/4" Hex Drive- Color Match
Woodfast screws are recommended for attaching metal to wood in some cases metal to metal. They are exposed fasteners made of carbon steel, coated with Zinc and an Oxyseal/Xylon Coating for long life.

Stitch Screw, Sharp Point
size #12 x ¾" ¼" Hex Drive-Color Match
Stitch screws are used to attach metal to metal such as lap joints in flashing. They can be used interchangeably with rivets. They are exposed fasteners.

Rivets
#42 or #44 (1/8" x 1/8") Stainless Steel rivet- color matched or non-painted
Rivets are used to attach metal to metal such as lap joints in flashing.

TMP recommends the following fasteners for use with copper:



Woodfast, Sharp Point
(Silicon Bronze)
Size: #10 x I" 1/4" Hex head -Natural finish
The Silicon Bronze fasteners are used for metal to wood applications, typically for the attachment of flashings. They are exposed fasteners.

Rivets
(copper rivet/brass mandrel)
Size: #42 or #44 1/8" x 1/8"
Rivets are used to join metal to metal such as lap joints in flashings.

Roof Preparation

New Construction:

Taylor Metal Products StreamLine Standing Seam™ roofing products can be installed for either new or re-roofing applications.

We recommend installing the StreamLine Standing Seam™ over a rigid continuous substrate such as plywood sheathing or decking. We recommend that the plywood be 1/2" or thicker. The product can also be applied over space sheathing at no greater than 24" on center. For best results the substrate should be smooth, flat and free of debris.

Cover the entire roof area with 301b ASTM rated felt paper. Apply the felt by rolling it out horizontally across the roof starting at the eave. Allow a 3" over lap for each course.

Lap end joints 6". Maintain the rule of keeping uphill courses lapped on top of downhill courses of felt. Tears and cuts should be replaced with new felt or repaired with roofing lap cement.

To prevent bonding between the copper and roofing felt, a layer of smooth building paper or a rosin sized slip sheet should be laid over the felt before installing the copper roofing.

Re-Roofing:

The StreamLine Standing Seam™ can be installed with felt over most existing asphalt, composition, fiberglass shingles or rolled roofing. Tile, gravel, wood shingles/shake, metal or any other type of roofing material should be removed to the bare sheathing. Inspect the substrate for damage or rot and replace sheathing as necessary. Apply the underlayment as described above.
Consider the following when installing the metal roofing over existing roofing materials:

- Building Codes: Local building codes will typically limit the number of layers of roofing allowed. Check with your agency.

- Solid Fastening: Check the condition of the substrate. Damaged or rotted plywood or decking will not provide for secure fastening. Repair or replace damaged or rotted substrates.

- Appearance: Irregular substrates may affect the overall appearance of the metal roofing product. Panel deformation may occur, however, product integrity will not be affected.

- Roof surface: Any warped or loose shingles must be nailed down along with any protruding nail heads. Remove all moss and other debris, including existing starter strips. Cut off all overhanging shingles and remove hip and ridge caps.

- Ventilation: Trapped moisture can cause premature failure of the metal roofing product as well as substrate, insulation etc. Provide adequate ventilation and appropriate moisture protection.

Ventilation

Proper ventilation is necessary for full roof life. Check local codes for venting requirements.

To provide for ridge and/or hip ventilation, remove (for retrofit) or leave out (for new construction) 2" of sheathing on both sides of the ridge center. Cover opening with flyscreen and secure the flyscreen with staples. Apply felt paper up to the edge of opening as explained in "Underlayment" section.

Insulation

Taylor Metal Products recommends allowing ventilation between the outer roof deck and the insulation. Lack of ventilation may trap moisture. The rib of the panel is not a source of ventilation for the area beneath the roofing panels. Check with your design professional or insulation consultant for applications or design details. Also check local building codes to ensure compliance.

Touch-Up Paint

Most of the time touch-up paint is supplied in spray cans. Spray cans are useful for painting large areas such as downspouts, pipe flashings, and other pre-existing areas.

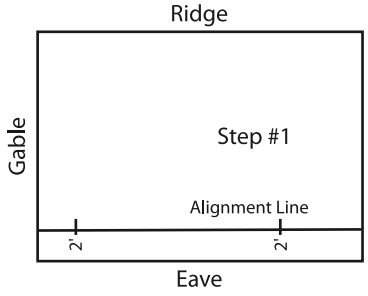
Scratches and scuffs in the finish should be touched-up but not sprayed. The paint should be well mixed and sprayed into a small container, then applied to scratches with a very fine brush or toothpick, just filling in the scratch. If the area is sprayed over, the differences in the chemical makeup will likely cause the touch-up paint to fade differently than the baked-on finish and cause a blotchy appearance over time.

It is important to get the roofing panels installed straight and you can't always depend on the gable/rake edge to be straight. After the underlayment has been applied you must now lay out an alignment line at the gable edge to align your first panel. You can use either of the following methods to check the gable edge to ensure the first panel gets started straight.

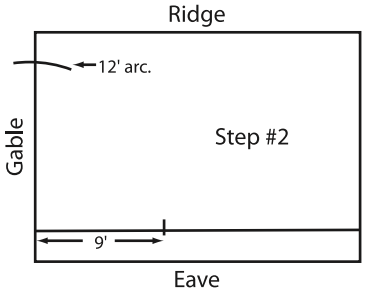
1: 3-4-5 triangle method

The first method utilizes the 3-4-5 triangle method. After the underlayment has been applied, you must now lay out a grid line along the gable edge to align your first panel. Here we are using a 3-4-5 triangle in increments of 9'-12'-15'(e.g. 3x3=9, 3x4=12, 3x5=15). For longer panels use larger multipliers (5x3=15, 5x4=20, 5x5=25).

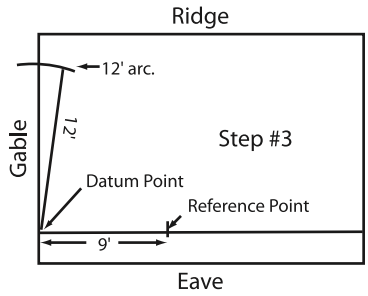
Step 1: Snap an alignment line 2 feet from the eave.



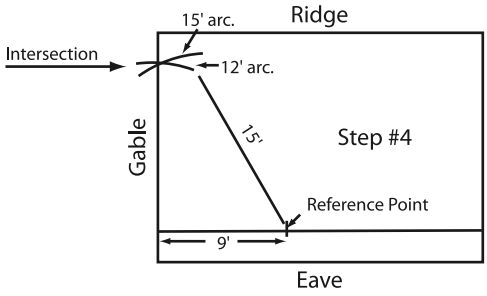
Step 2: Start from a point (datum) on the alignment line 1/4" to 1/2" from the left (or right depending on which edge you're starting from). Establish a 12' arc from datum point.



Step 3: Measure 9 feet from the datum point along the alignment line and establish a reference point there



Step 4: From the reference point make a 15-foot arc to intersect the 12-foot arc. Snap a chalk line from the intersection point to the datum point. You now have a straight edge to align your first panel along the gable.

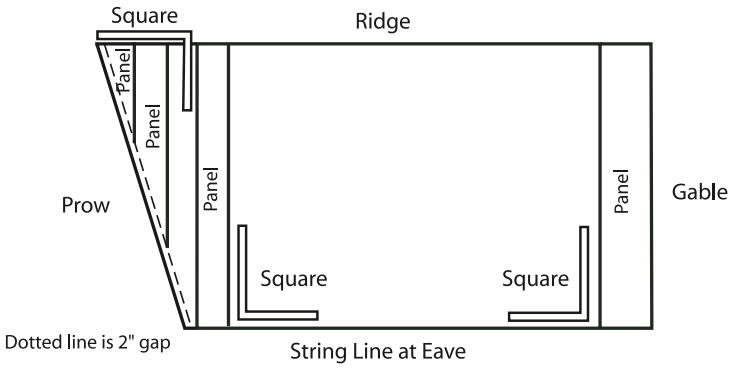


Step 5: If you have valleys: Since your underlayment will cover the true center line of your valleys, snap lines at these areas for aligning valley flashings.

#2: Framing Square method

The second method utilizes a framing square. Begin by stretching a string line from corner to corner at the eave edge. After the eave flashings are installed, lay down your first panel and square it at the eave using a framing square along the screw flange edge of the panel and squaring to the string line. Once square, secure alignment panel by putting one panel screw in at the bottom and at the top. If a gable roof, check for the gable side of the pan to be no more than 3/8" off square. The standard gable flashing will compensate up to 3/8". If more than 3/8", a compensating gable flashing will need to be used. Another method is to rip the first panel at the correct angle and to up-end the ripped edge 1" at 90 degrees and use the standard gable flashing. It may be required to rip the last panel. For extreme out of square conditions, consider using a Prow Flashing.

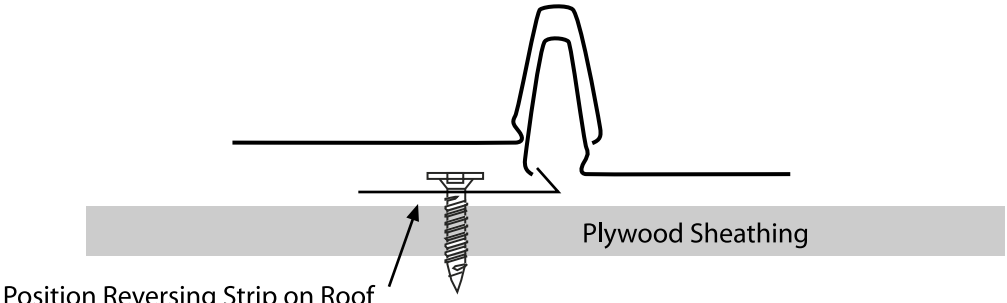
For a Prow roof, use the same procedure above to square the first panel. Go to the top and measure the distance from the prow side of the first full panel to the top of the prow edge. (the prow flashing should be installed first. Allow for 2" between the prow pan up-leg and the rib of the first full panel). For example: If your measurement was 3' – Make a pencil mark on the framing square for this measurement. It is critical to maintain and square with the eave. Snap a chalk line from the top mark to the bottom mark. This will be the actual line you will set your first prow panel on. Also, it will give you the angle required to rip your first, second and third prow panels. Install the first two prow panels and remove the first full-length panel before installing the third prow panel. If you're accurate on your squaring, cuts and alignment, your first full-length panel will be square to the eave line.



Hip Roofs

Hip roofs present some challenges to panel alignment. The easiest method of aligning panels on a hip roof is to start in the center of the roof area and use the "Reversing Strip" (see page 10) to install the panels starting at center and installing panels in both directions (left & right). Use either method of panel alignment to be sure the panels are straight and centered. Position the reversing strip at the center point and fasten into place. Then install the panels as indicated. Incidentally, you can also start the panels at center on a gable roof and work both directions.

Alternately you can align panels on a hip roof by starting with a longer panel (5' to 7') in length. Place the panel in the appropriate spot (usually 5' to 7') from the left or the right and use either method of aligning the panels to get a straight line to work from. Install this panel, and then work back to install the shorter panels and then the rest of the panels as usual.



SR Reversing Strip

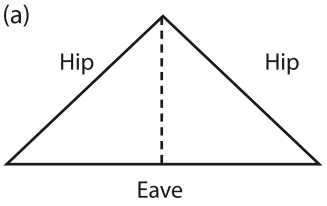
The reversing strip allows the StreamLine™ panels to be installed working both left and right. The reversing strip is most commonly used on hip roof applications although it can be used on other roof styles.

Caution: We do not recommend reversing panels on the same pitch when using metallic colors (i.e. weathered zinc or copper penny) or galvalume. The paint/coating will reflect differently when the panels are reversed and could look like a different color.

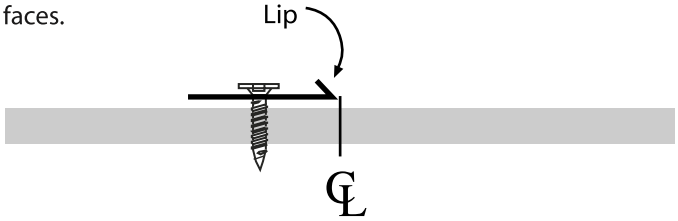
Reversing Strip Application

- Locate the center of the roof section you are working on. Use 3-4-5 Triangle or Framing Square Method. Snap a straight line on the mark perpendicular to the eave line. It is important that the line is straight, so that the panels will be straight. See (a)

(a)

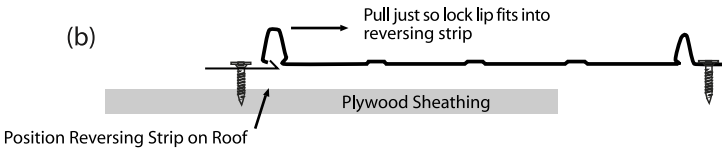


Position the turned edge of the reversing strip along the center-line and fasten to the sheathing every 18" to 24" with a waferhead screw. It won't matter which direction the strip faces.

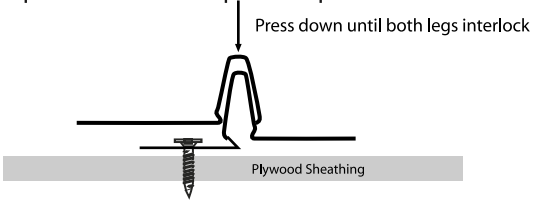


2. Place a panel of the appropriate length on the roof and hook the lock lip of the panel (located on the upper/female rib) to the lip of the reversing strip. See (b)
Pull the panel so it fits tightly into reversing strip and fasten the panel to the sheathing with waferhead screws.

(b)



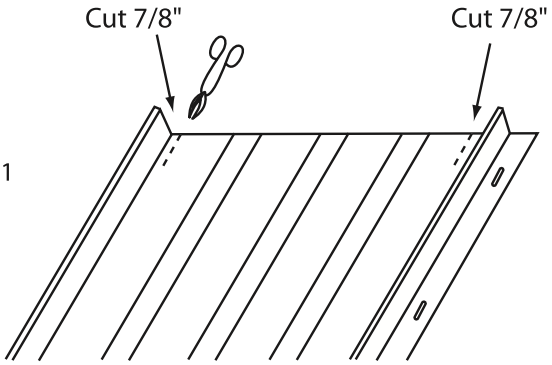
3. Position the next panel so that the female rib is over the female rib of the previous panel laying the opposite direction. Press down until the panel is locked onto the previous panel. Fasten that panel in place.



Top of Panel – Upend

To up-end panels, snip the pan 7/8" beside the female rib, and 7/8" at 1/4" from the inside of the male leg. The up-end tool makes an accurate marking template. After snipping 7/8" cuts, place up-end tool into pan and bend up to just over 90 degrees. The up-end acts as a baffle. The 1/4" gap at the screw flange allows for clearance to snap in the next panel. You will need to fill the gap at each side of the upended panel with flex seal. (Figure 1)

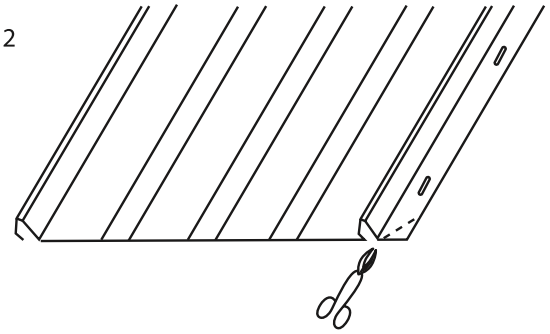
Figure 1



Bottom of Panel

Snip off the corner of the fastening flange approximately 45° for appearance. (Figure 2)

Figure 2



For Low Pitch Applications

Alternate #1

On pitches of less than 3/12, place up-end tool into pan, bend down and under to form an open hem under the pan. This step brings the pan edge below the eave flashing edge which stops any potential wicking or siphoning. (Figure 3)

If using this method, allow for an additional ½" of panel length.

Figure 3

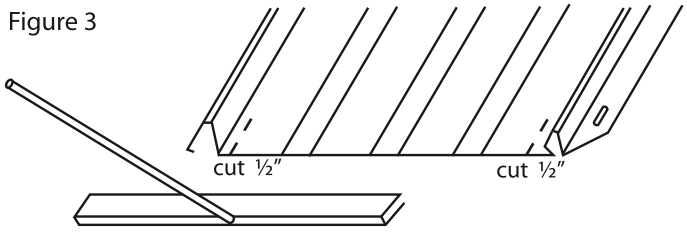
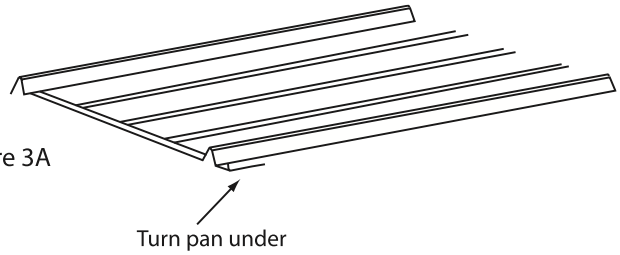


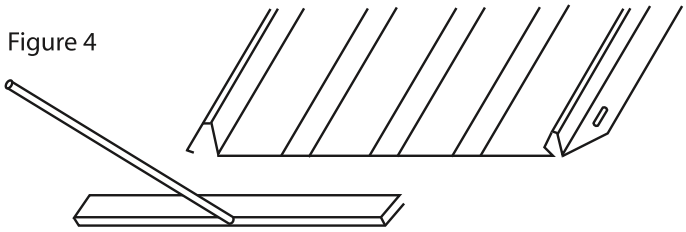
Figure 3A



Alternate #2

On pitches of less than 3/12, use a ½" bending tool or other bending tool and make a 30˚ bend (down) to form a drip edge on the pan of the panel (Figure 4).

Figure 4



Note:
Taylor Metal Products minimum slope recommendation is 3/12 pitch. On projects less than 3/12, contact Taylor Metal Products sales representative with project specifics.

Prior to Panel Installation:

Before you can install the panels you need to install Underlayment (ie. Felt paper), Flyscreen, Eave flashing, Valley Flashing, Prow Gable flashing, and other flashings as conditions apply.

Consider the following before ordering and/or installing roofing panels or flashing.

The roof area will rarely come out to the even foot. If working on a gable roof and the incremental distance from gable end to gable end is 4" or less (i.e. 48' 4") consider using the compensating gable flashing. This flashing is used to compensate up to 2" on either one or both ends of the roof. The beginning panel can be started 2" in for the edge and end 2" for the opposite edge. Although to maintain a visually consistent appearance on each gable end, TMP recommends using compensation gable on both ends, rather than standard gable on one end and compensating gable on the other. Using the compensation gable flashing will keep you from having to cut a narrow panel for one end of the roof and will produce a more appealing visual appearance.

Compensating gable flashing is also useful if the roof is out of square and can take up 2" of top to bottom differential.

If the incremental distance from ridge to eave is greater than 4" then consider using the standard gable flashing. Start the panel on the gable edge, on your alignment line and install the panels normally. When you reach the opposite gable end measure the remaining distance add 1" to that measurement and cut the panel lengthwise at that measurement.

First Panel Installation:

You may install the panels working from left to right or right to left. It is a matter of choice and convenience. Determine which direction the panels are to be installed before preparing the panel.

Align the upper (female) leg of the panels along the alignment line you made along the gable edge. Allow the panel to overhang at the eave edge 1" to 1-1/4". Apply the 1/4" bead of caulking along the eave flashing, position the panel and fasten the panel into place using the waferhead screws. Be certain screw heads are level and flush to the screw flange or they may dent or show through the next panel.

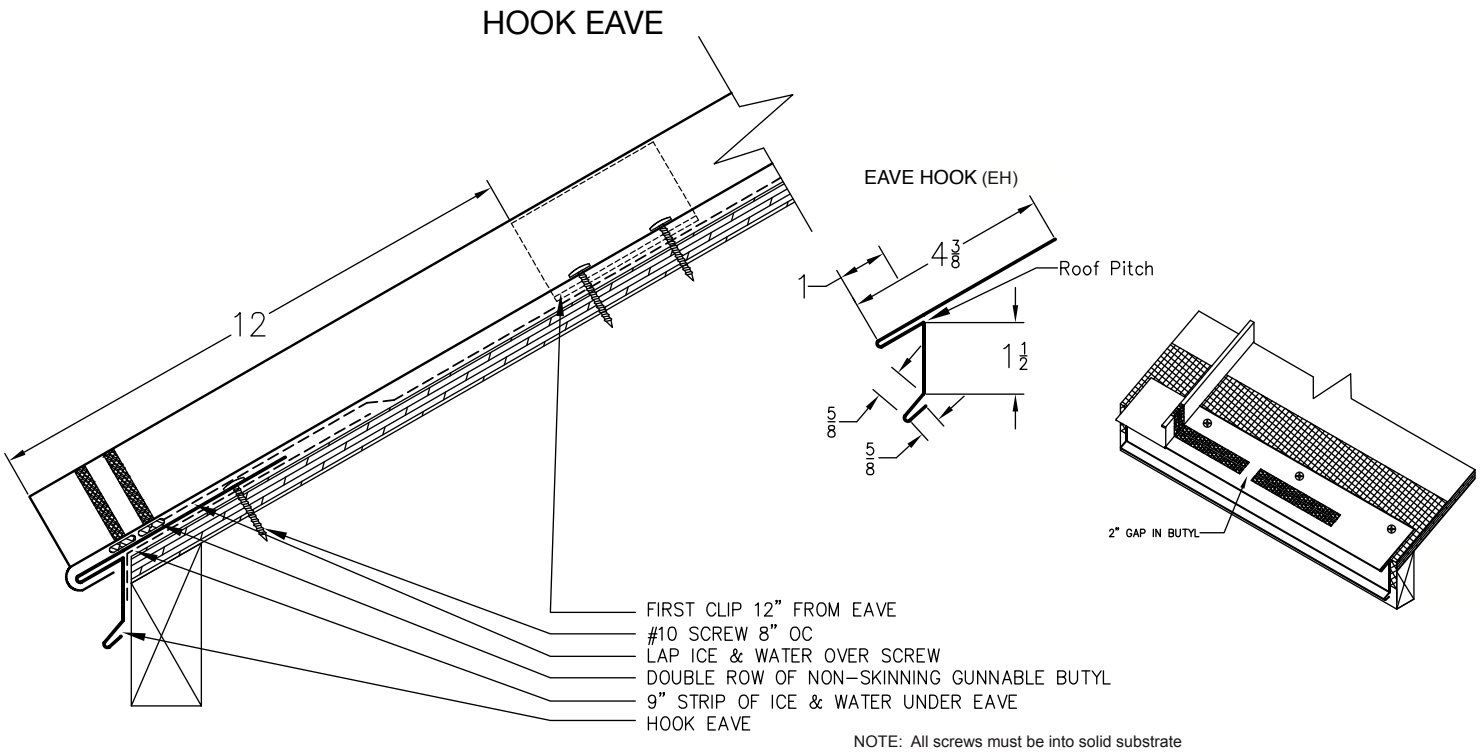
Second and Sucessive Panels:

Apply the bead of caulking on the eave flashing (see Eave Section, page 13) and place panels flush along the eave edge maintaining the overhang established on the first panel. Position the female leg of the next panel over the male leg of the panel previously installed and lock the panels into place using light hand pressure, foot pressure or tap in place with a rubber mallet. Lock the panels from the bottom up. When the rib is locked into place and in the proper position, fasten the panel into place with waferhead screws.

Repeat for successive panels.

Note: If panels exceed 40' in length, pin the panels at center by placing 3 to 4 fasteners 1" apart along the screw flange. This process will pin the panels at the center and allow expansion and contraction to occur each direction from the center.

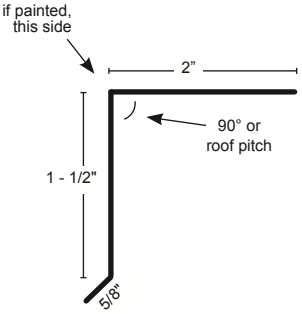
Eave Flashing



NOTE: All screws must be into solid substrate
Flashing must be lapped 4" with 2 rows of non-skinning gunnable butyl

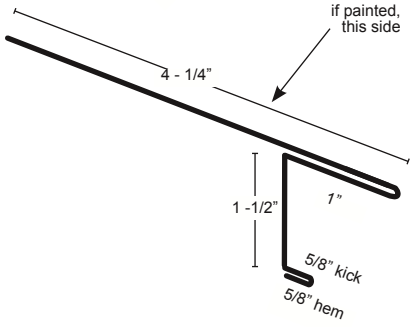
SLES Eave Standard

Specify:
- Roof Pitch
- With or without standard drip lip



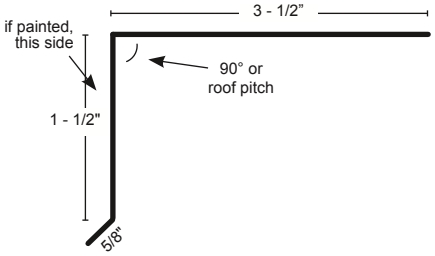
SLEH Hook Eave

Specify:
- Roof Pitch
- With or without standard hem



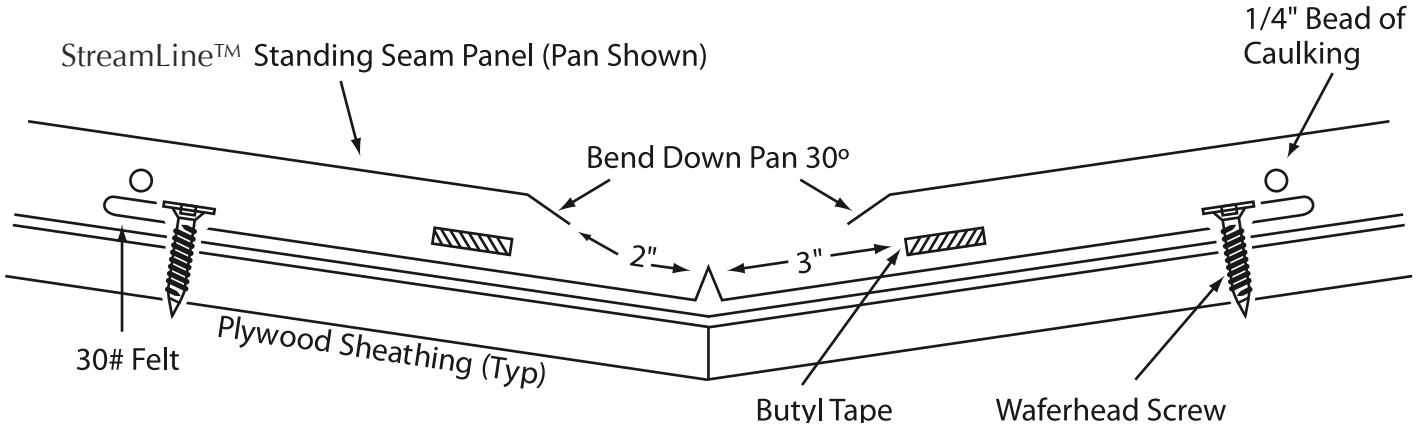
SLELP Eave Low Pitch for less than 3/12 Pitch

Specify:
- Roof Pitch
- With or without standard drip lip

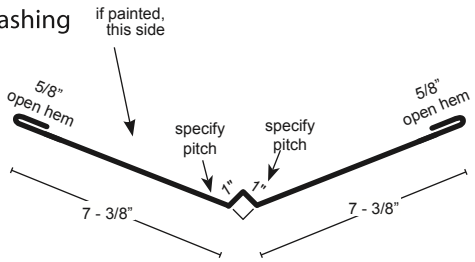


Eave Flashing Application

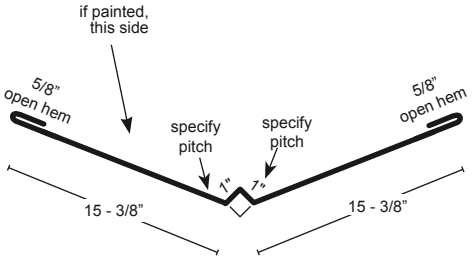
- Install eave flashing prior to panel installation (if gutters are installed you may need to notch out for gutter fasteners)
- Use Waferhead Screws and fasten to substrate 18" to 24" or as needed.
- Allow 1" to 2" lap and apply sealant to overlap.
- Apply 2 1/4" beads of sealant along top leg of eave flashing 1" +/- from outside edge. (You may also use butyl mastic)
- Install fascia leg into the gutter.
- Insulate between dissimilar metals.
- Note: Customize flashing for more or less coverage.
- Note: If you experience panel crowning back bend panels at the bottom of panel or turn down edge.



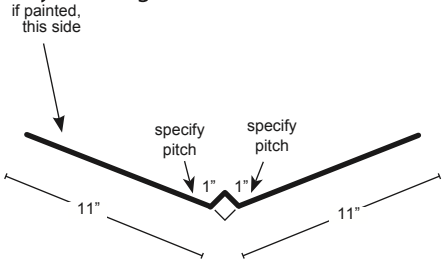
SLVF Valley Flashing
"W" Valley, Standard



SLVFW Wide Valley Flashing



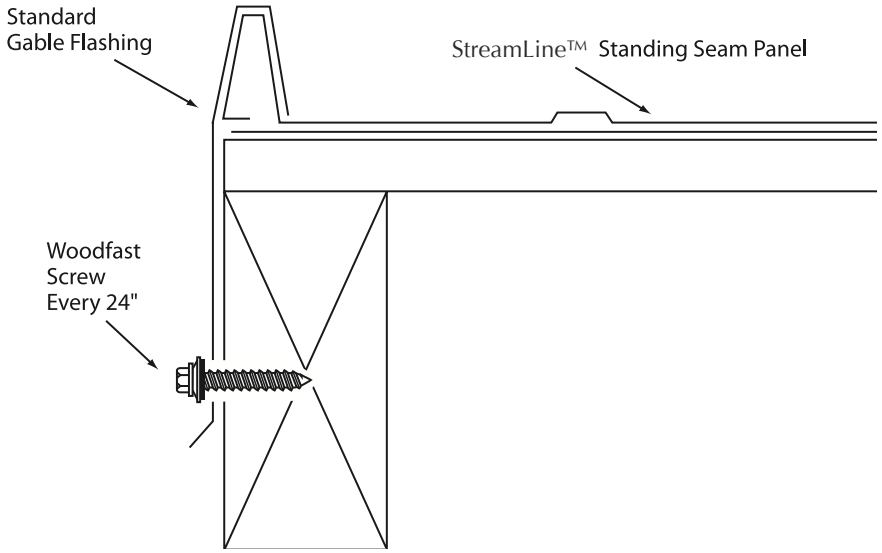
SLVF24 Valley Flashing 24"



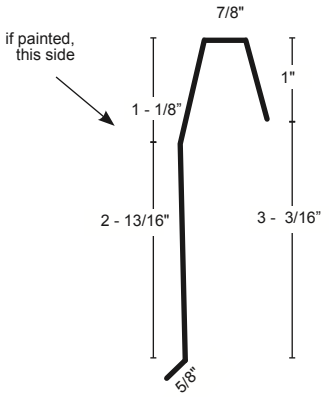
Valley Flashing Application

- Install valley flashing by fastening through the pan as near to the outside edge (near the hem) as possible every 18" to 24" on each side. Cover fastener heads with sealant/caulking.
- Cut the hems 6" back on each side of the next valley flashing. Apply three 1/4" beads of caulking between the valley pans.
- Form valley flashing over the ridge as necessary.
- Trim panels for angle of valley 2" from the valley center point. ***Remove any burrs from cut edge of panels and use a damp cloth to wipe any filings from the panel.*** If the panels crown (pan of panel raising up) backbend panel or use the 1/2" up- ending tool and either bend the panel end down 30 degrees or turn the 1/2" under, forming a hemmed edge.
- Apply butyl mastic tape or a 1/4" bead of sealant/caulking, 3" from the center of valley. ***If using a wide valley, the panels will be set farther from the center of the valley pan, place butyl tape so it is l" from end of panel.*** Apply a bead of sealant/caulking on top of the hems of the valley flashing.
- Install panels being sure to fasten panels through fastening flange into substrate, as close as possible to hemmed edge of valley flashing. Do not penetrate the valley flashing.
- ***Heavy snow conditions require a wider valley pan. Leave more space between the end of the panels and the valley center line.***
- Consider using wide valley flashings for low pitch roofs.

Gable Flashing



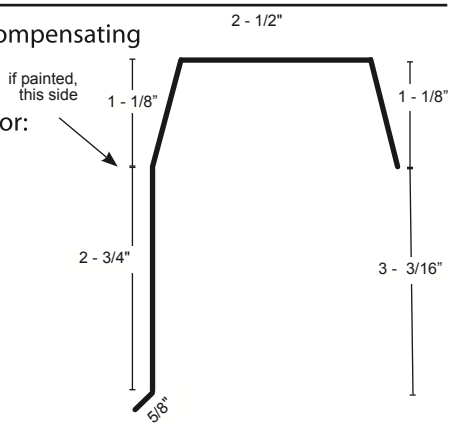
SLGS Gable Standard



SLGC Gable Compensating

Use to compensate for:

- Out of square roof
- Up to 2" coverage

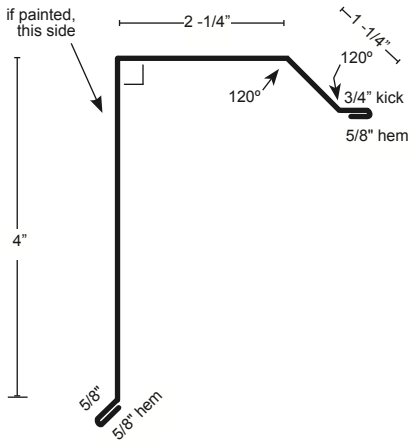


Gable Flashing Application

- Install to hold down beginning and/or ending panel(s).
- Trim last panel (if needed) to allow 1" leg to be bent up to receive gable trim.
- Place firmly over rib (or field formed leg).
- Overlap flashing 2" to 3" top over bottom and place 1/8" bead of caulk under lap.
- Fasten to fascia board every 24" with woodfast screw.
- Consider using compensating gable if roof is out of square or to avoid cutting very narrow panel for the ending panel.
- Compensating gable flashing will allow installation to begin or end, up to 2" from gable edge.

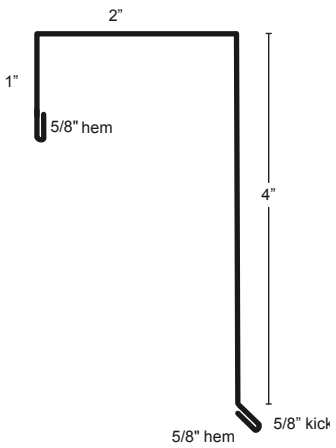
Gable G-17

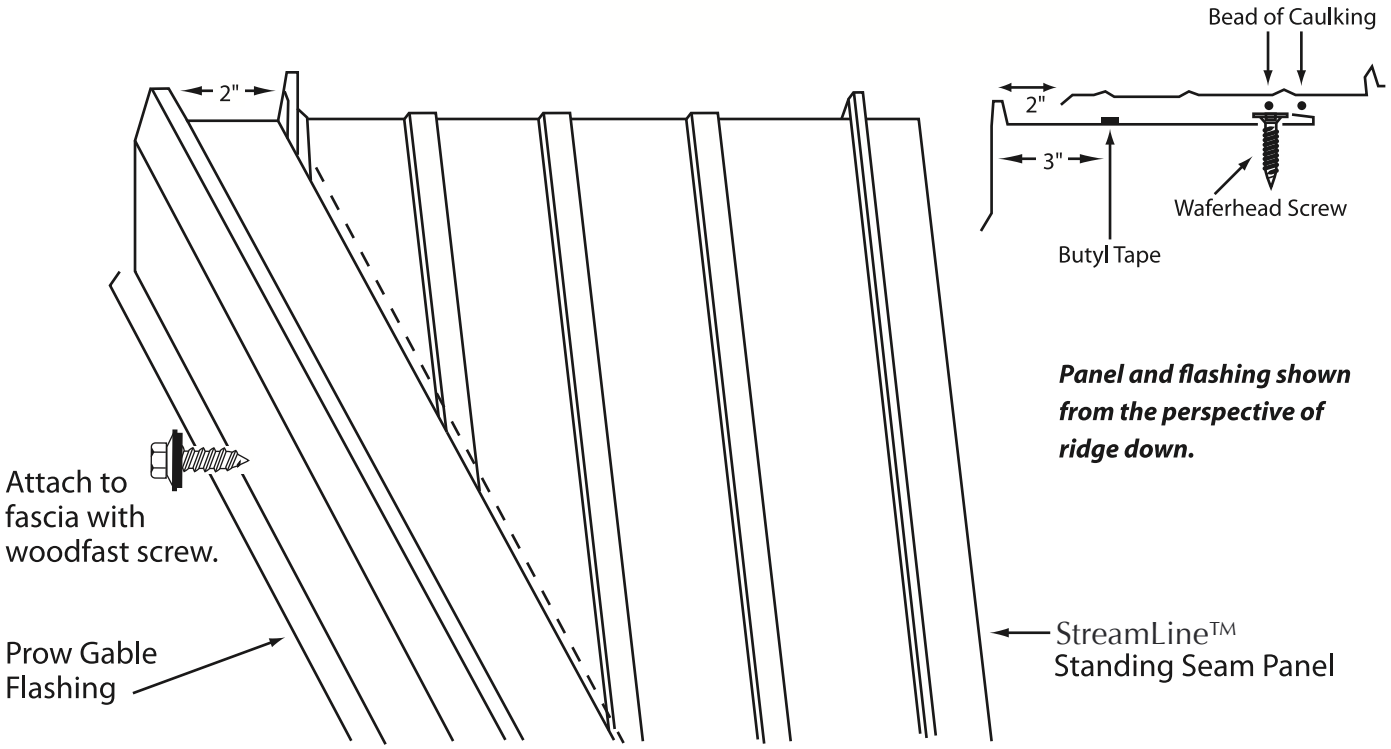
SLG17



Box Gable

SLGB

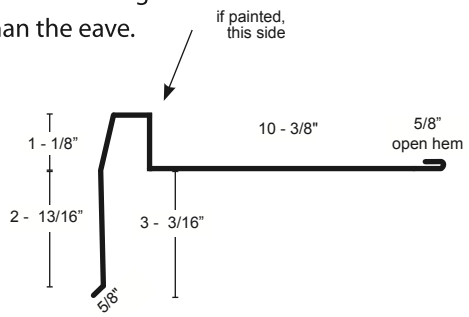




Panel and flashing shown from the perspective of ridge down.

SLPF Prow Flashing

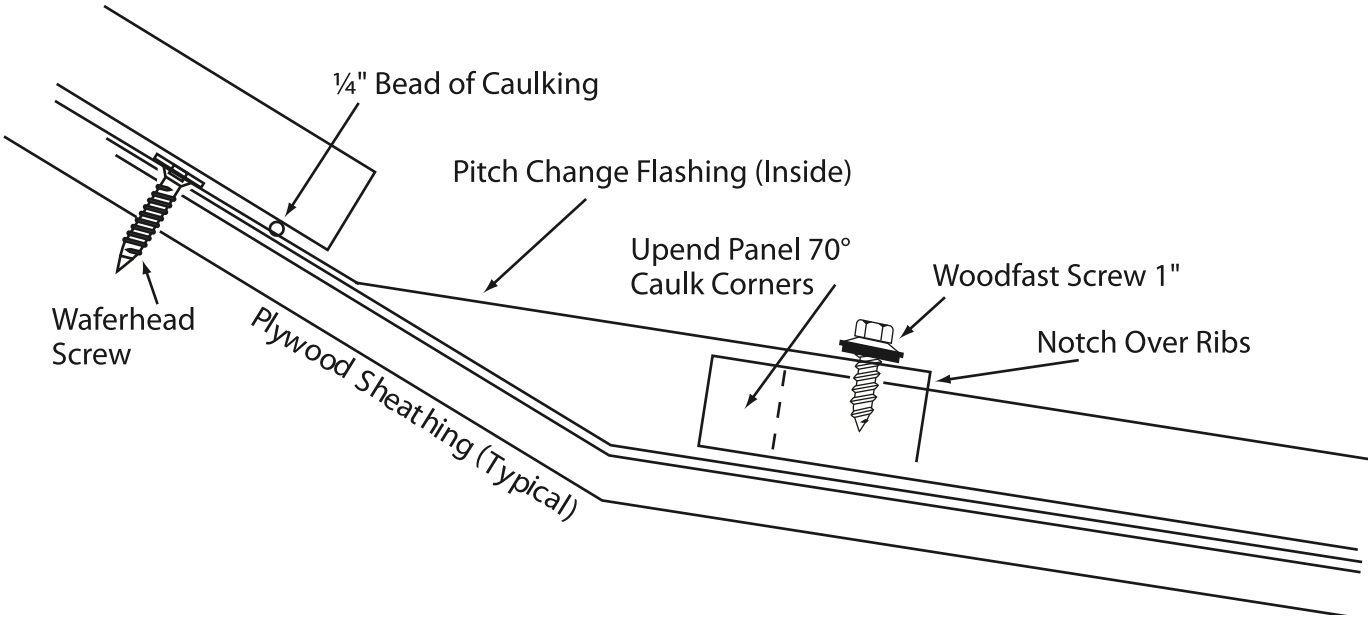
Use for gable where ridge is longer than the eave.



Prow Gable Application

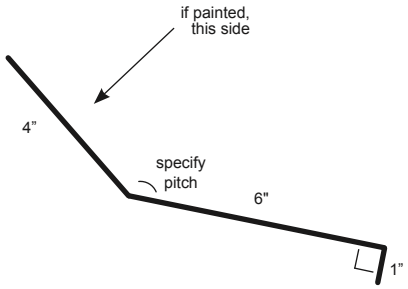
- Install the prow gable flashing on the roof prior to panels.
- Fasten to fascia board every 24" with woodfast screw.
- Fasten pan to sheathing with waferhead screw every 18" to 24" as close to the hemmed edge as possible. Cover screw heads with sealant/caulking.
- Trim panels to angle of prow 2" from the edge of the raised portion of flashing. ***Be sure to remove any burr on the cut edge of the panel and use a damp cloth to wipe any filings from the panel.***
- Apply butyl tape or a 1/4" bead of sealant/caulking 3" (1" under end of panels) from the raised edge of the prow flashing. Apply a 1/4" bead of sealant/caulking to the top of the hem of the prow flashing.
- Fasten the panels as close to the hemmed edge of the prow flashing as possible.
- Due to the long cuts typical of the angle of the prow, using the 1/2" up-ending tool, bend the cut edge down 30degrees or turn the edge under forming a hem.

Pitch Change Inside



SLPCI Pitch Change Inside

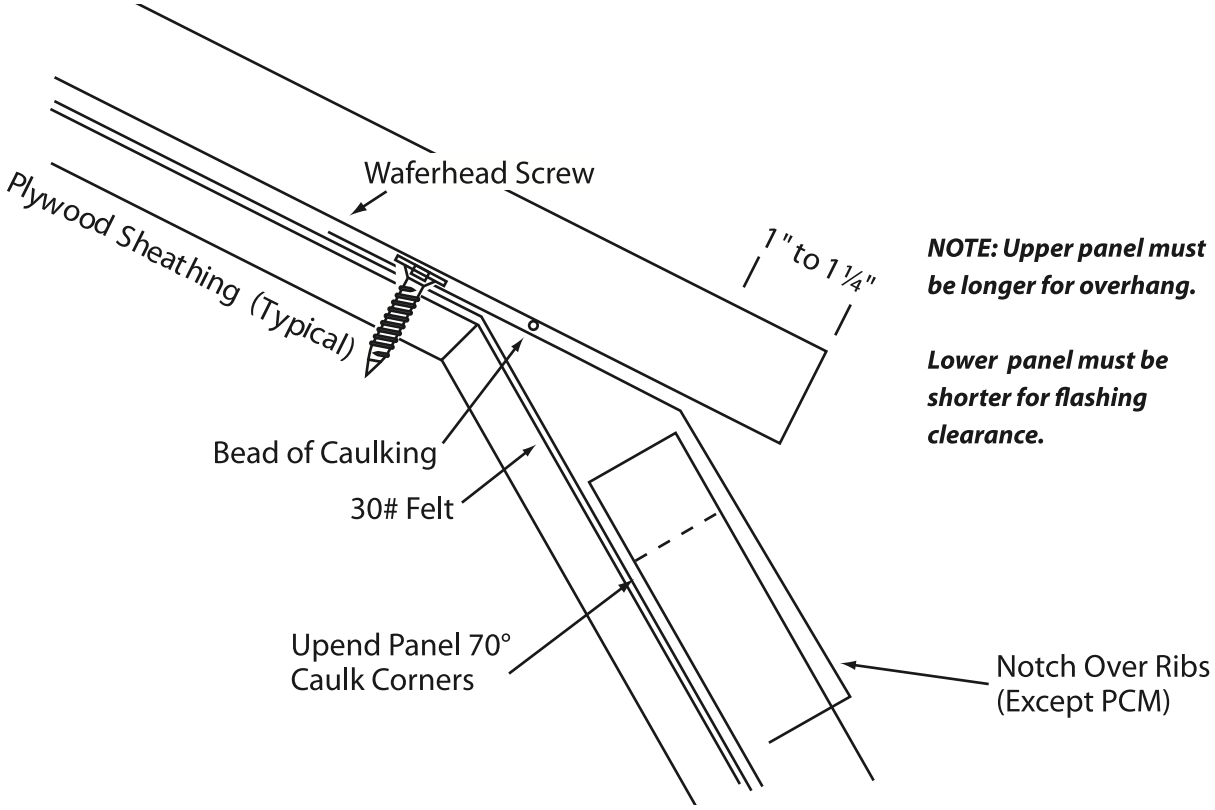
- Requires notching
- Specify pitches



Pitch Change Inside Application

- Install lower panels and all flashings associated with the lower roof. Upend panels, apply sealant/caulking to corners of upended pan.
- Notch 1" leg of flashing to fit over rib of panels.
- Attach upper leg of flashing to sheathing with a waferhead screw on the upper leg every 18" to 24" or as needed. Place sealant/caulking on screw head.
- Allow 3" overlap on flashing, apply three 1/4" beads of sealant/caulking under lap.
- Attach lower leg of flashing to every other rib, with a woodfast screw, rivet or stitch screw.
- Place a 1/4" bead of sealant/caulking on the upper leg of the flashing 1-1/2" from the break. Install the panels 1/2" from the break.
- Note: Custom flashings may be required when pitches are close, e.g. 3:12 to 1:12

Pitch Change Outside

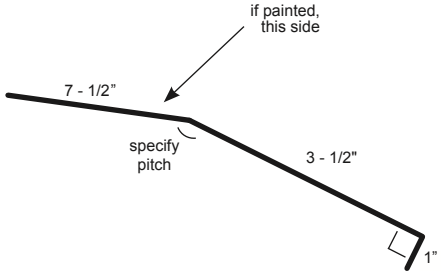


NOTE: Upper panel must be longer for overhang.

Lower panel must be shorter for flashing clearance.

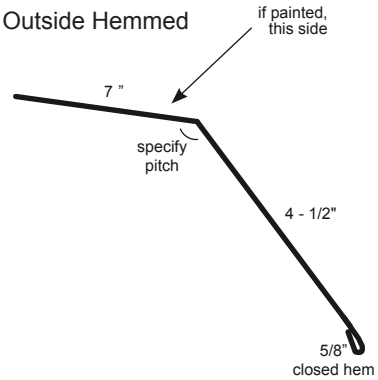
SLPCON Pitch Change Outside Notched

For minimal pitch changes.
Specify degree of bend or both pitches (i.e., from 2:12 to 6:12)
Requires notching.



SLPCOH Pitch Change Outside Hemmed

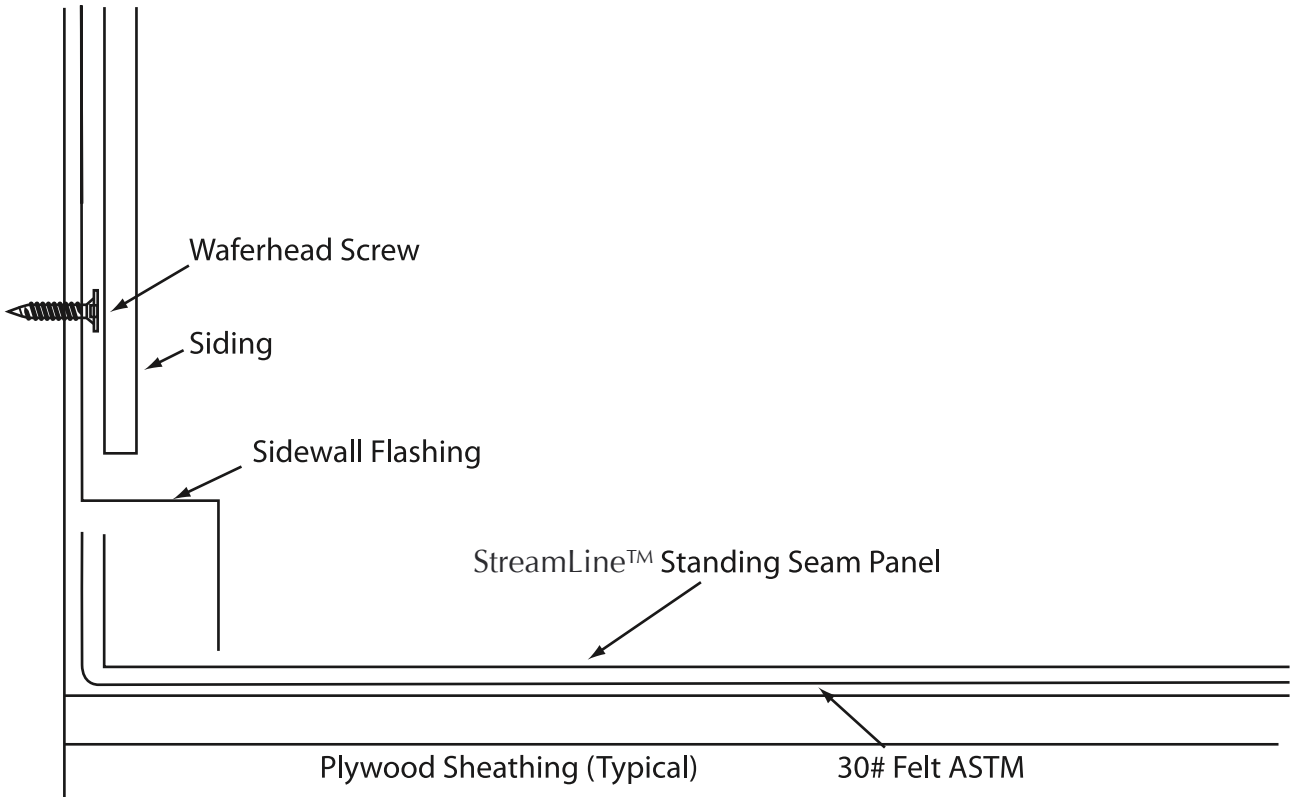
For major pitch changes.
Specify pitches.
Notching not required.



Pitch Change Outside Application

- Transitions are figured from the upper slope to the lower slope.
- Install panels on the lower roof section first and install all appropriate flashings with this roof area. Upend the panels and apply sealant/caulking to the corners of upended pans.
- Notch 1" leg of PCO for panel ribs. For either the PCO or the PCM attach the flashing to every other rib of the panels, with either a woodfast screw, rivet or stitch screw.
- Attach upper leg of flashing 1/2" from top with waferhead screw, apply sealant/caulking over screw head. Place screws every 18" to 24" on flashing.
- Allow 3" overlap on flashings and apply three beads of sealant/caulking at lap.
- Install panels on upper section allowing a 1" to 1-1/4" overhang.

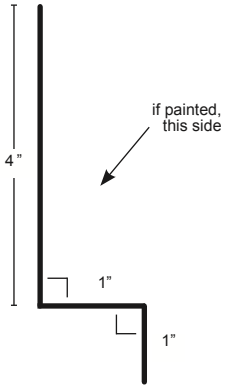
Sidewall Flashing



SLSW Sidewall

Used where panel sides begin or end against a wall.

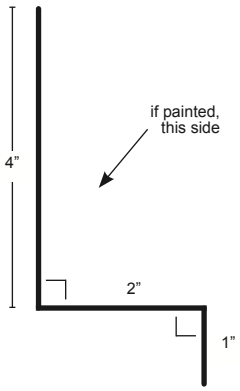
Specify with or without lip.

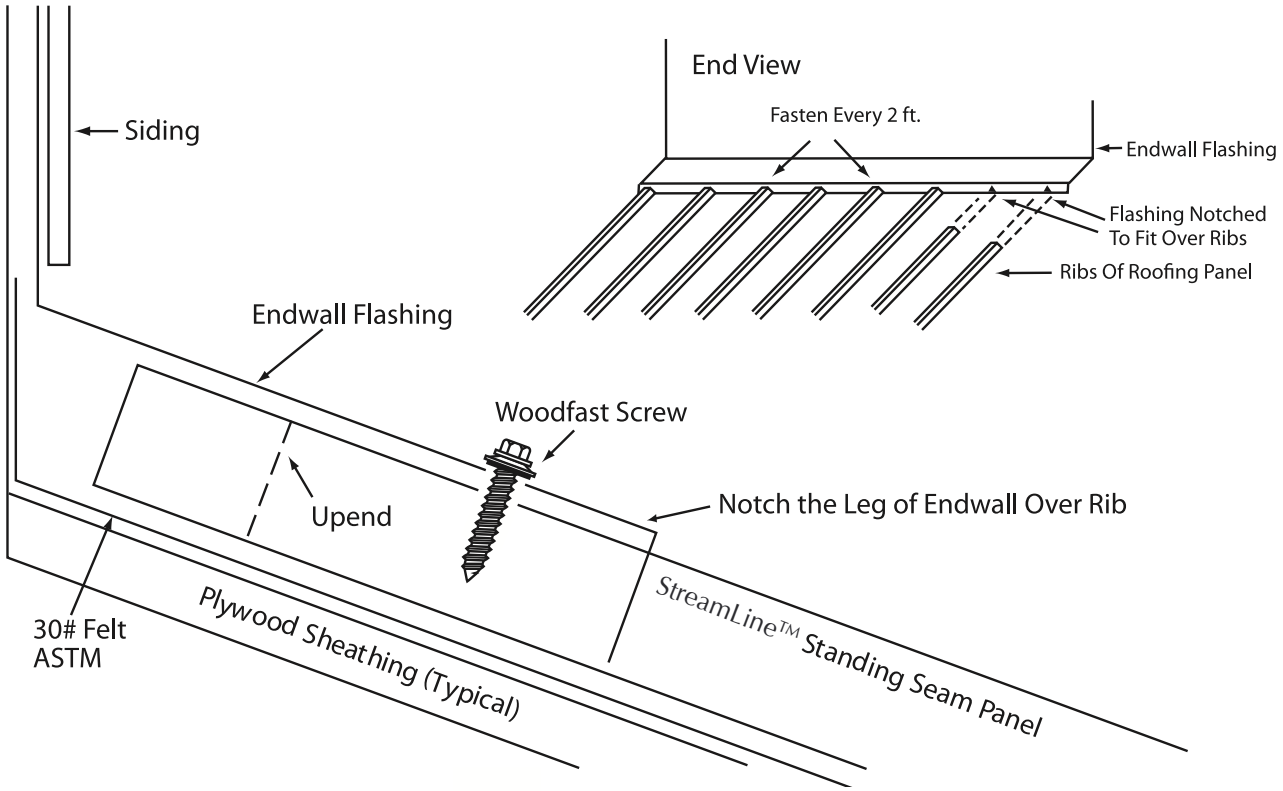


Sidewall Application

- Sidewall flashing is used where wall runs parallel with slope.
- Install roofing panel first.
- Flash over rib if starting panels at wall or over upended edge of panel (pictured).
- Install flashing under siding (pictured). Attach to wall with waferhead screw for this option.
  OPTION: Siding is cut 1/4" deep and lip is caulked into the cut to seal. Attach to wall with woodfast screw every 24".
  NOTE: Specify with lip if using this method of installation.
- Overlap flashing end to end 2" to 3" and caulk at lap.

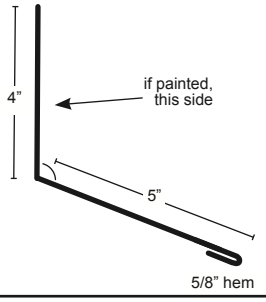
SLSWC Sidewall Compensating



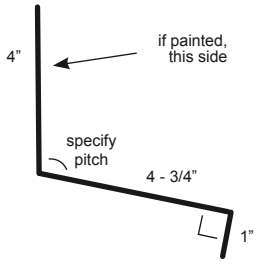


SLEWH Endwall Hemmed

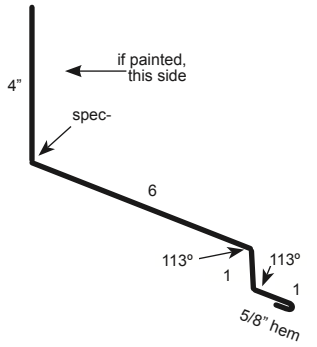
Used where panels slope away into a wall.
Specify pitch and with or without lip.
Requires notching.



SLEWN Endwall Notched



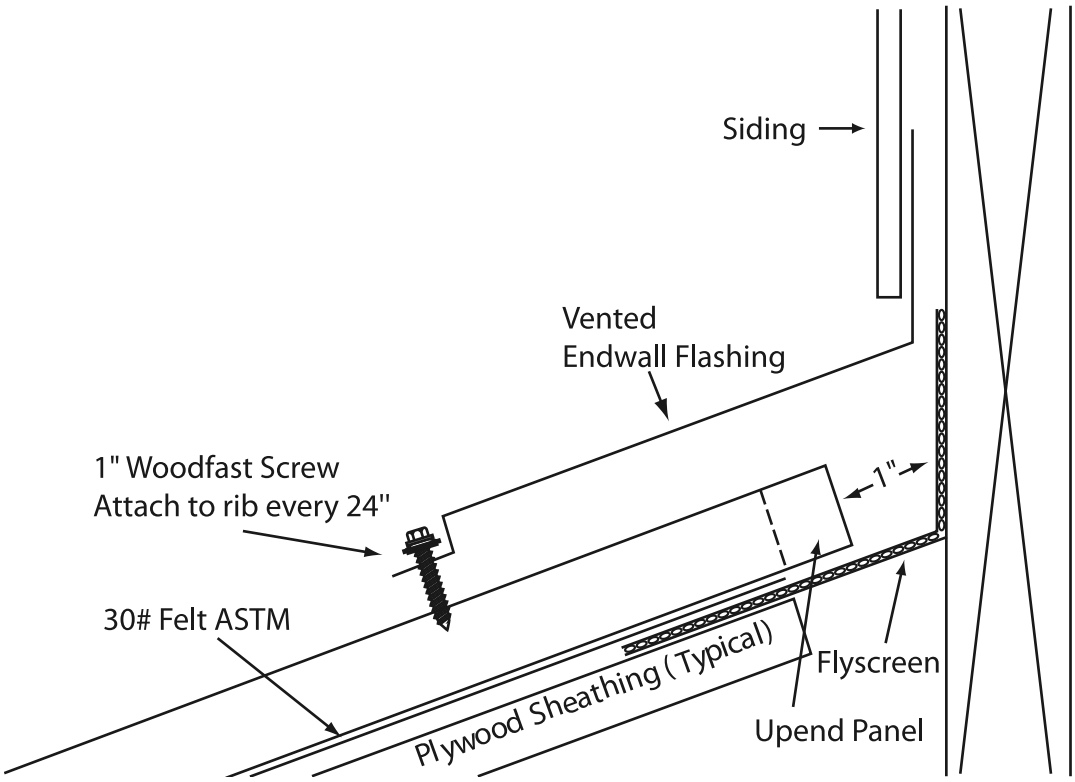
SLEW17 EW17 Endwall



Endwall Flashing Application

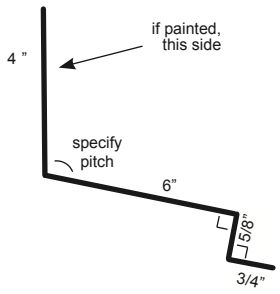
- Endwall flashing is used where the roof slopes away from a wall (i.e., clerestory or shed roof)
- Upend top of panel and apply sealants/caulking to the corner of the upended pans before installing flashing.
- Notch 1" leg of endwall to fit over ribs of panels.
- Upper leg (2-1/2") is placed under siding. OPTION: siding is cut 1/4" deep and the lip is caulked into the cut to seal.
  NOTE: Specify with lip if using this method of installation.
- Attach flashing to every other rib of panel with rivet, woodfast screw or stitch screw.
- Overlap flashing end to end 2" to 3". Place 1/4" bead of sealant/caulking under lap.

Endwall-Vented Flashing



SLEWV Endwall-Vented

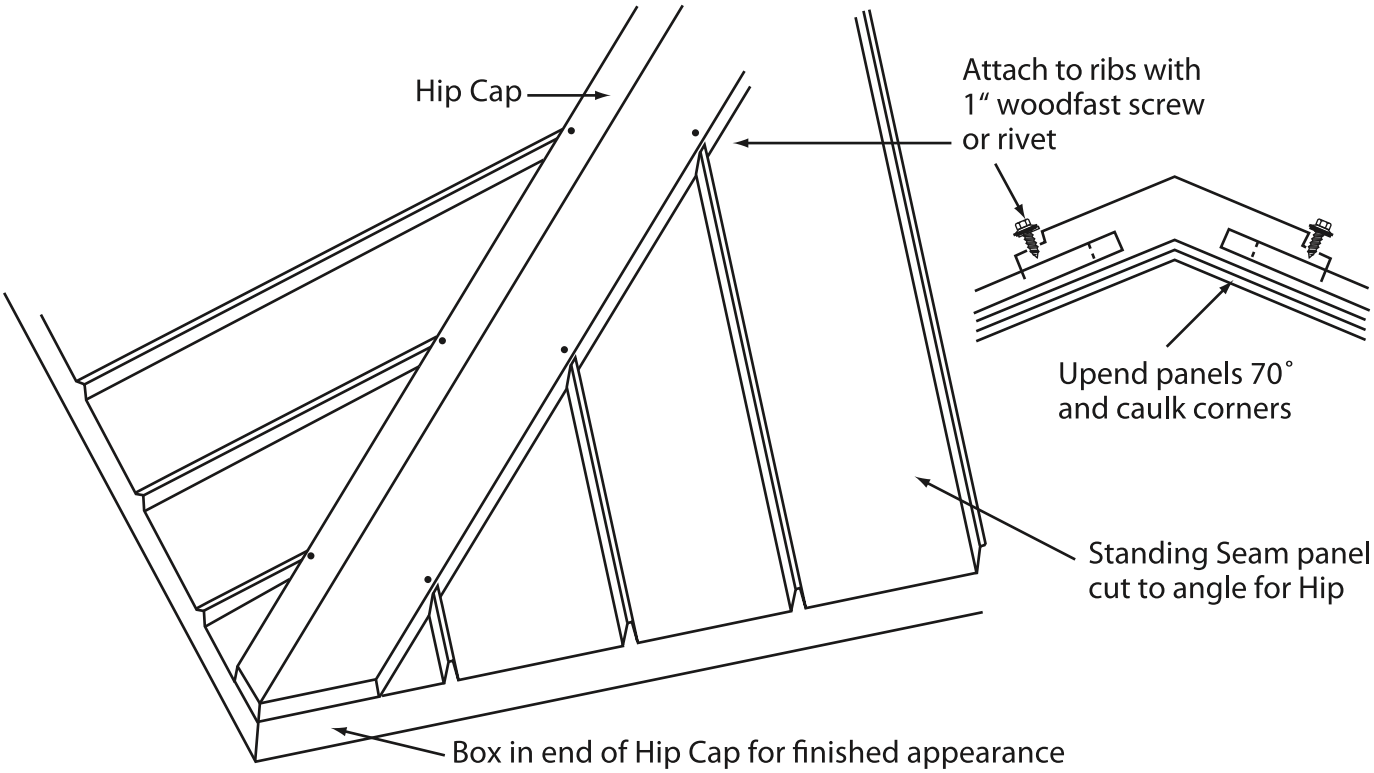
Used where panels slope
away from a wall and
venting is required.
Specify pitch.
Specify with or without lip.



Vented Endwall Application

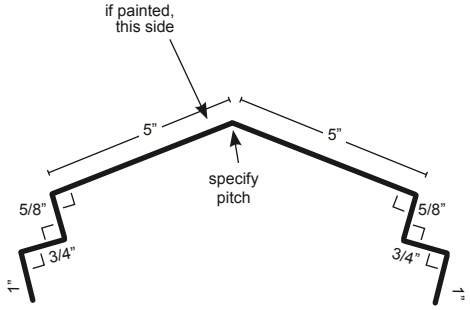
- Vented endwall flashing is used to provide ventilation at the wall. Cut out or leave the sheathing back 2" from the wall and cover with flyscreen.
- Upend top of panel and caulk the corners before installing the flashing.
- Place the Vented Endwall Flashing on top of the ribs of the panels. The upper leg (2-1/2") is placed under the siding. Option: Siding is cut 1/4" deep and the lip is caulked into the cut to seal. NOTE: Specify with lip if using this method of installation.
- Attach flashing to every other rib of panel with rivet, woodfast screw or stitch screw.
- Overlap flashing end to end 2" to 3". Place 1/4" bead of sealant/caulk under lap.

Hip Cap Flashing

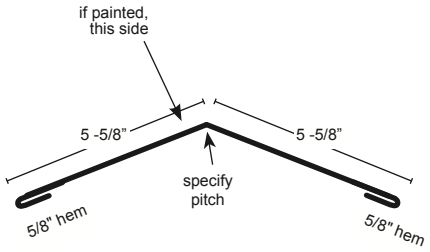


SLHS Hip Standard Notched (Unvented)

Requires notching.
Specify pitch.



SLHR Hip/Ridge Hemmed



Hip Cap Flashing Application

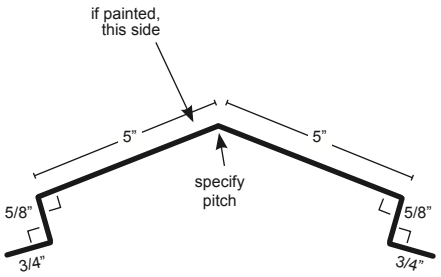
- Cut standing seam panel to match angle of hip ridge.
- Install panels and upend, caulk the corners.
- Notch Hip Cap (as required) for ribs on panel(s). Notch with snips to match rib alignment.
- Allow Hip Cap to overhang the bottom corner at least 1 1/2".
- Box in the lower end to match angle of corner.
- Overlap Hip Cap, top to bottom, 2" to 3" and caulk each lap.
- Attach Hip Cap to each rib of panels with woodfast screw, pop rivet, or stitch screw.

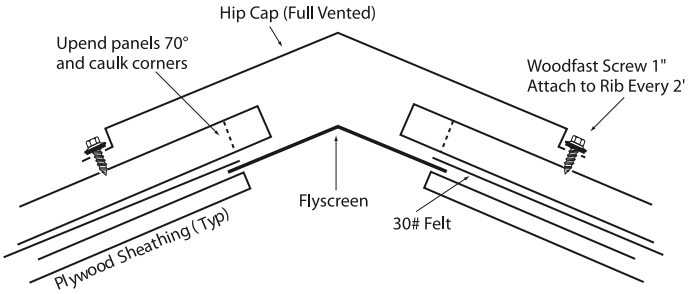
NOTE: If ribs are over 24" apart on panel angles, use “Z” Strip for secure fastening.

Hip Cap Flashing - Continued

SLHFV Hip Full Vented

Specify pitch.



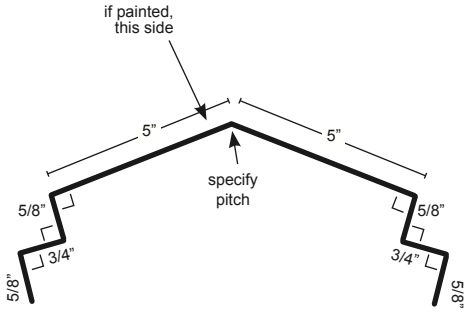


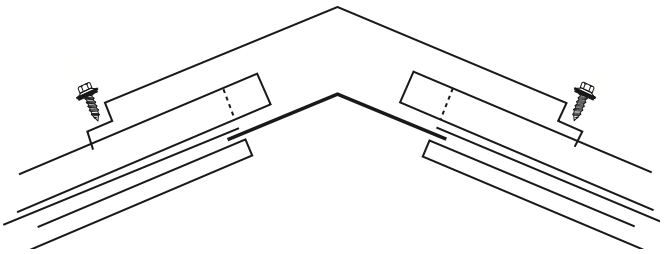
Application

- Center hip cap, align with peak.
- Attach hip cap to every rib on each side.
- Overlap hip cap, top to bottom, 2" to 3" and caulk under lap.
- Fasten hip at lap with rivet or woodfast screw.

SLHHV Hip Half Vented

Requires notching.
Specify pitch.



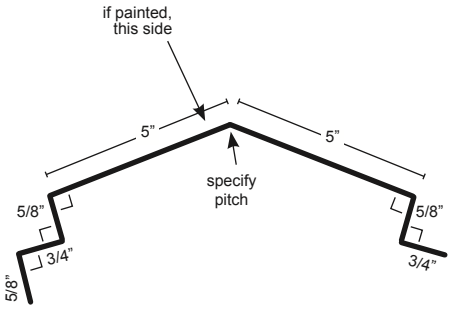


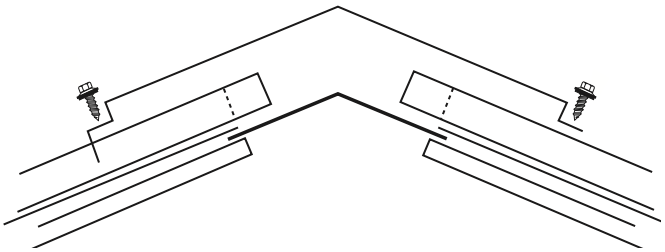
Application

- Install per instructions for hip, full vent (HFV) except notch 5/8" legs to fit over ribs.

SLHVV Hip Venturi Vented

Requires notching.
Specify pitch.



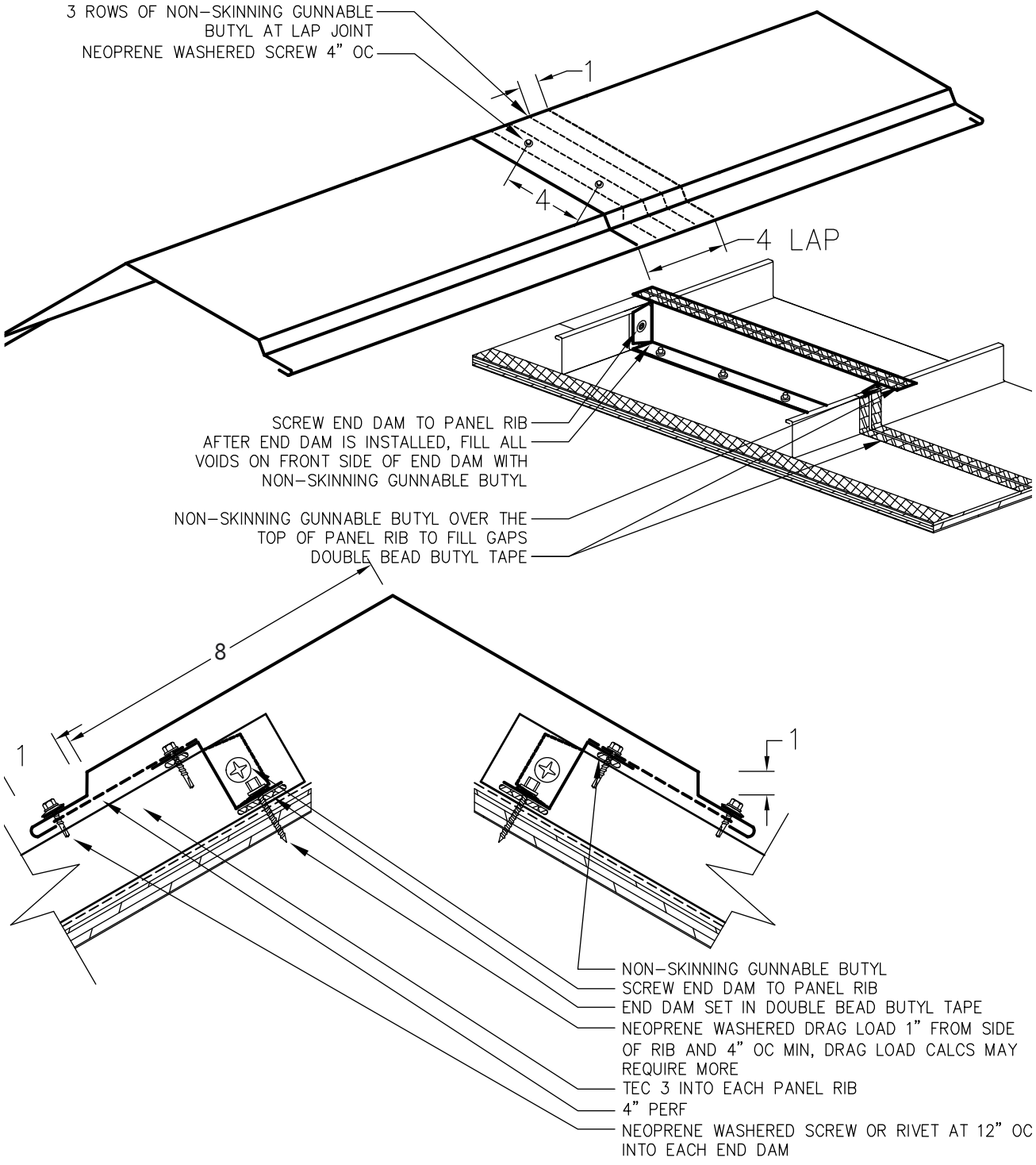


Application

- Install per instructions for hip full vent (HFV) for vented side, and per instructions for Hip standard (HS) for non-vented side.

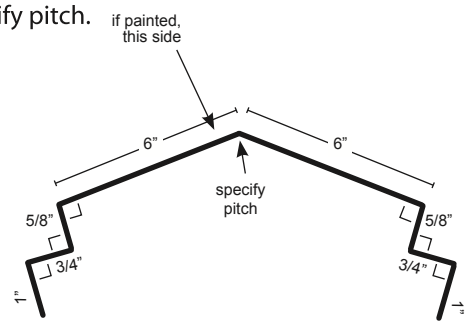
SLRFVW Wide Ridge Full Vented

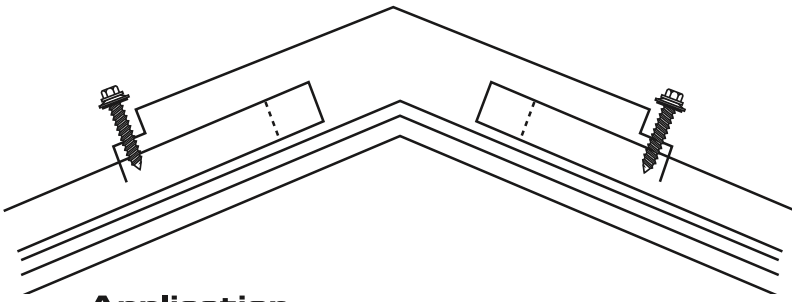
3-piece System: Ridge Cap, Perforated Vent, C-Flashings. 13 square inches of vent per foot of ridge cap.
Specify pitch.



SLRS Ridge Standard

Unvented.
Requires notching.
Specify pitch.



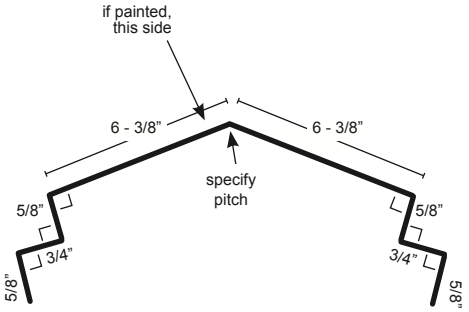


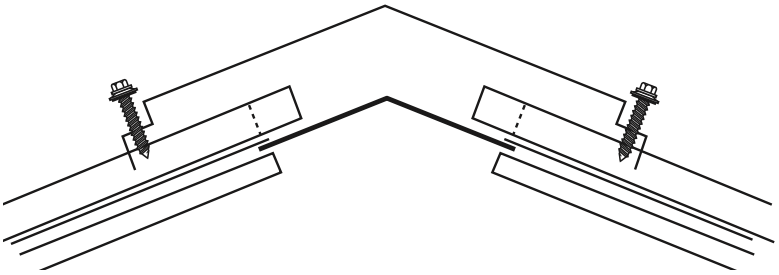
Application

- Center ridge, align with peak.
- Notch 1" leg to fit over ribs.
- Attach rib to ridge every 2', on each side with woodfast screw.
- Overlap ridge end to end 2" to 3". Apply 1/4" bead of caulking under lap.
- Fasten ridge at lap with rivet or woodfast screw.

SLRHV Ridge Half Vented

11 square inches of vent per foot of ridge cap.
Requires notching.
Specify pitch.



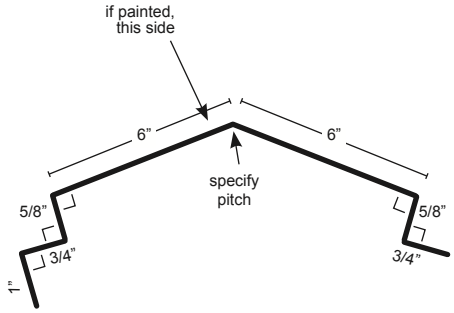


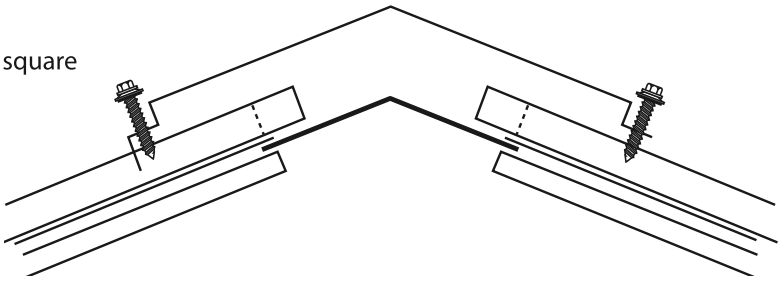
Application

- Install per instructions for ridge full vent (RFV) except notch 5/8" legs to fit over ribs.

SLRVV Ridge Venturi Vented

Fully closed on windward side.
Full vented, opposite side. Equivalent to or greater than 9 square inches of venting per foot of ridge cap.
Requires notching.
Specify pitch.



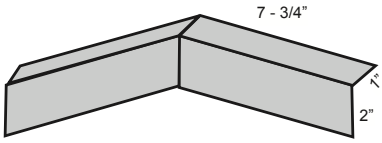


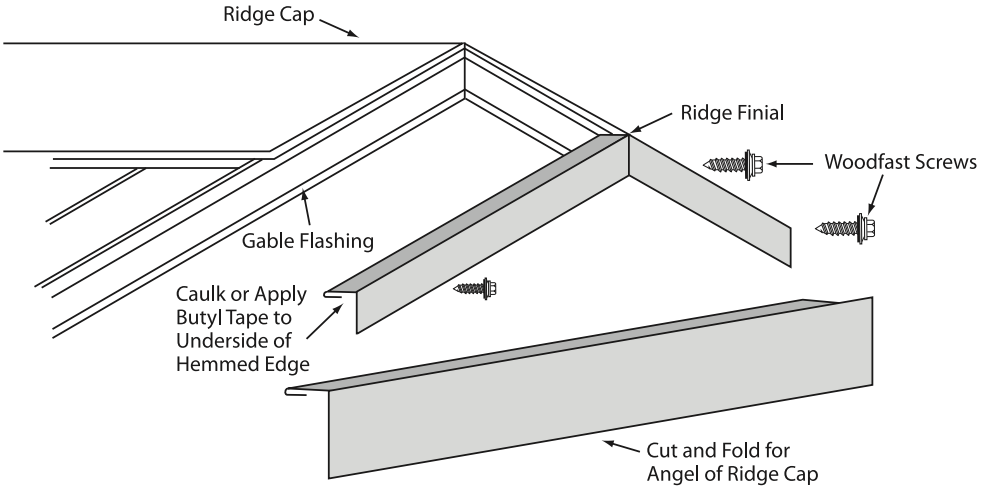
Application

- Install per instructions for ridge fall vent (RFV) for vented side; and per instructions for ridge standard (RS) for non-vented side.

SLRF Ridge Finial

End caps for ridge cap.



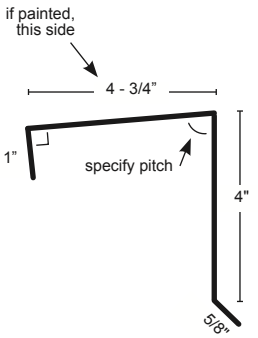


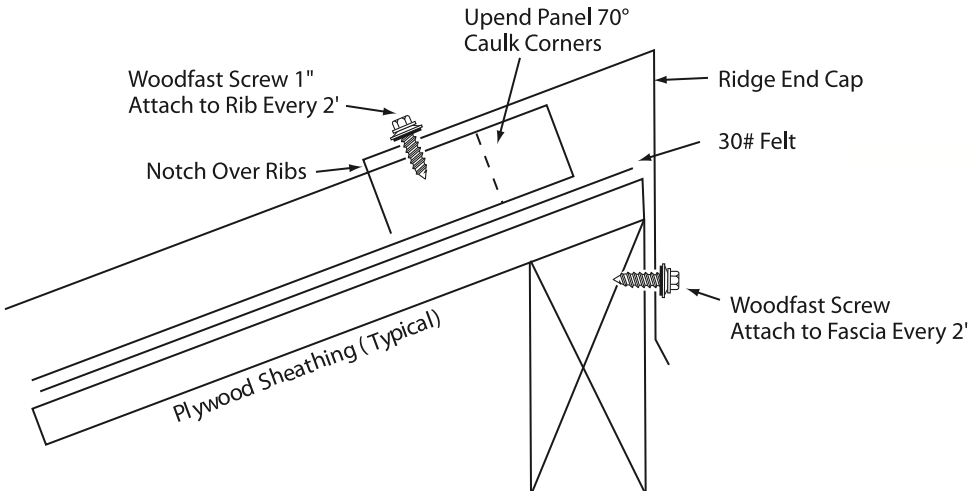
Application

- Install after ridge cap and gable flashings are in place.
- Snip the center of 2" leg and bend top 1" leg to fit over ridge cap.
- Use caulking or butyl tape to seal between ridge cap and hem on finial cap.
- Use woodfast screws or rivets to fasten finial to ridge cap through the 2" face and top of finial.

SLREC Ridge End Cap

For use on clerestory and shed-type roofs.
Requires notching.
Specify roof pitch





Application

- Notch l" leg to fit over rib of panel.
- Fasten through ridge end cap into ribs of panel every 24" with woodfast screw or rivet.
- Fasten through 4-3/4" leg of ridge end cap into fascia board every 24" with woodfast screw.
- Overlap flashing end to end 2" to 3". Place 1/4" bead of caulk under lap.
- Fasten ridge end cap at lap with rivet or woodfast screw.

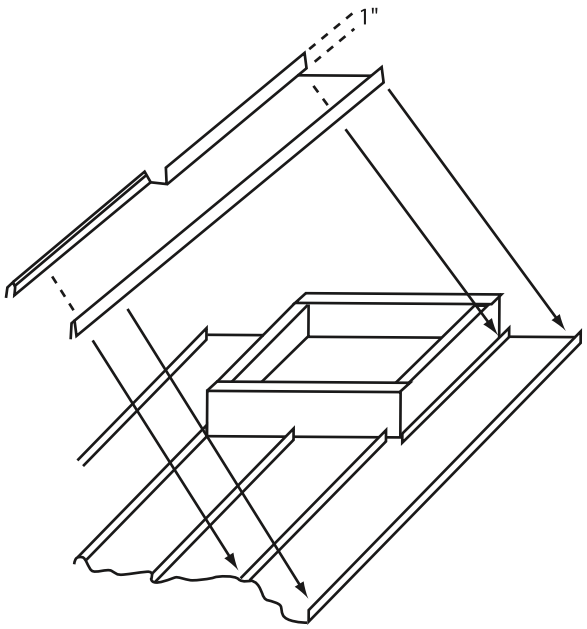
Skylight or Chimney Flashing

The following instructions are applicable to most typical skylight or chimney applications. However, your individual application may be unique and require custom flashing and/or special installation. Be sure to check with the skylight manufacturer to determine recommended flashing and whether deviation will result in nullifying your warranty. The use of a cricket is advised in some situations, especially where the drainage is into a curb that exceeds 2' 6", or if the roof area will have a lot of debris failing on it. Crickets are specially made to fit the curb/chimney and are used in place of the head flashing. Installation information for the cricket and the head flashing is the same.

Step 1 - Panel Installation

The panels adjacent to the skylight/chimney curb are positioned so the panels on the sides are cut even with the upper (top) curb. The bottom panels are butted against the bottom of the curb. Upend and caulk panels as usual.

The side panels may need to be cut to allow them to fit around the curb. Be sure to allow an additional l" to be bent up along the curb. The upper panels will be installed later in Step 4.

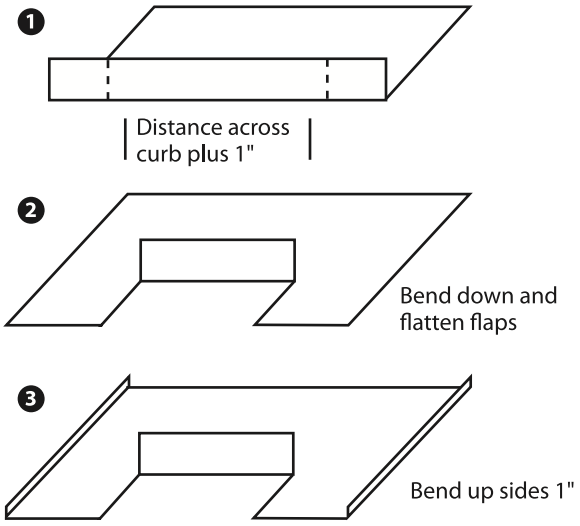


Step 2 - Head Flashing

1) The head flashing is first cut along the dotted line. This cut is made after measuring the distance across the top of curb/chimney. Add 1" per side to this measurement. Mark the flashing and cut down to the bend.

2) Bend down and flatten the flaps on each side of the head flashing. It is better to over-bend the flaps so they will lie flatter on the panel.

3) Measure the distance across the panels on each side of the curb. Mark the flaps of the head flashing so they will fit across the pan, add 1" and cut off the remainder. Use an upender tool to bend up the 1" on the sides to 90 degrees.

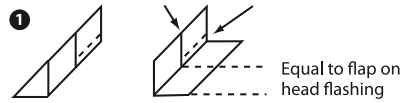


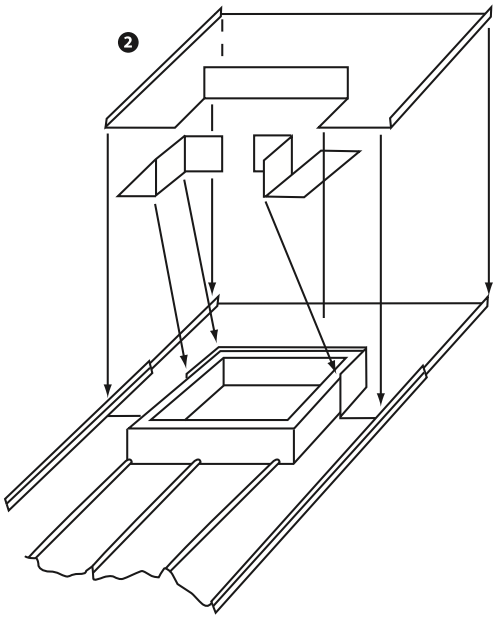
Step 3 - Assembling and Installing the Head Flashing

1) Prepare the corner flashings by cutting along the bend so the remainder is equal to the length of the flap on the head flashing. Bend the cut leg over 90 degrees.

2) Position the head piece and the corner flashing to fit around the curb and over the panels. Be certain to caulk any place the panels and flashings meet as well as any joints, cracks, laps, etc.

3) Fasten all components as necessary with woodfast screws or pop rivets.





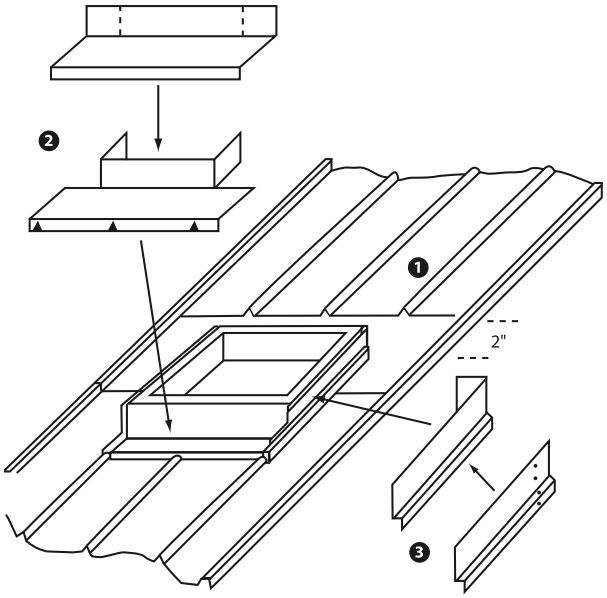
Step 4 - Final Assembly

1) Install the rest of the upper panels now. The panels across the top are installed 2" to 3" away from the curb making sure the top of the head flashing is covered by at least 8" of panel. Use caulking or butyl tape between panels and head flashing.

2) The bottom (endwall) flashing is installed next. Notch flashing and bend edges around curb. Cut lengths 2" longer on each side of curb.

3) Bend top end of side (sidewall) flashing to fit around top of curb; run flashing down side. Cut sidewall flashing to extend under endwall flashing. Fold 2" ends of endwall flashing over sidewall flashing to finish. Caulk and seal as needed.

4) Fasten all components as necessary with woodfast screws or pop rivets.

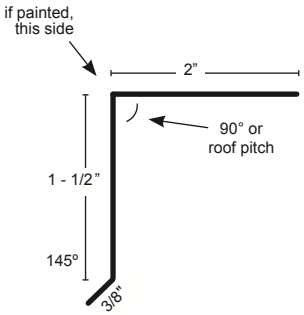


Standard Flashing Selection

StreamLine (12'6" lengths)

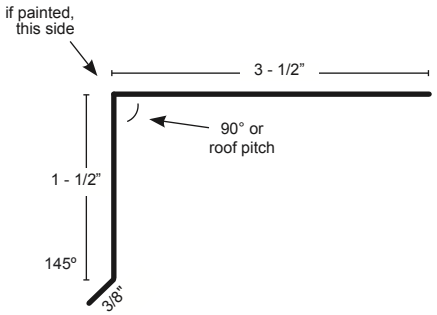
Rev. 1/17

Eave Standard
SLES



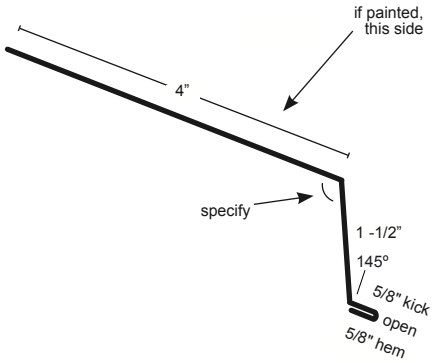
S.O. 4-1/8" Weight: 3.4 lbs.

Eave Low
SLELP



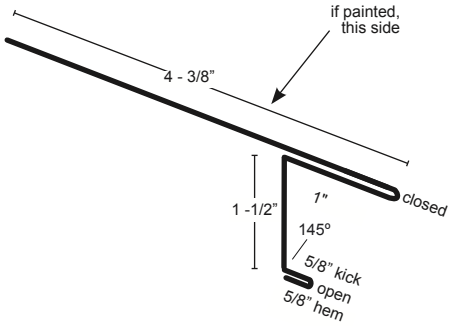
S.O. 5-5/8" Weight: 4.6 lbs.

1 1/2" Eave
SLE1.5



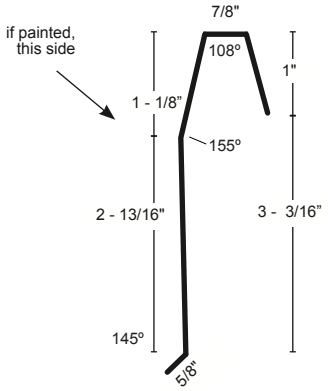
S.O. 6-3/4" Weight: 5.4 lbs.

Hook Eave
SLEH



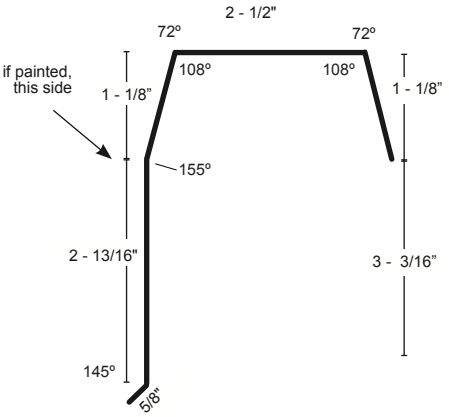
S.O. 8-1/8" Weight: 6.6 lbs.

Gable Standard
SLGS



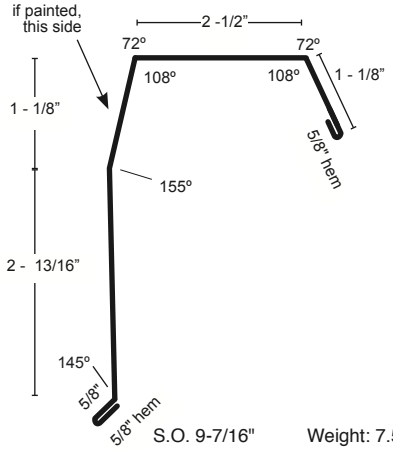
S.O. 6-7/16" Weight: 4.6 lbs.

Gable Compensating
SLGC



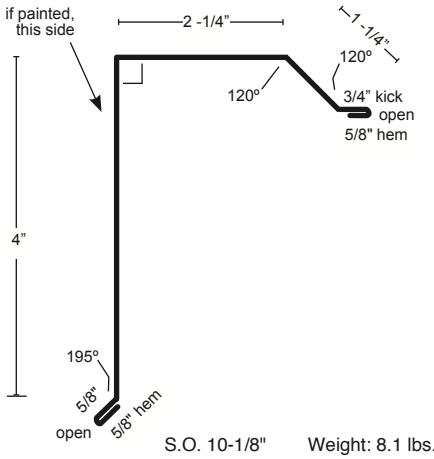
S.O. 8-3/16" Weight: 6.6 lbs.

Gable Compensating Hemmed
SLGCH



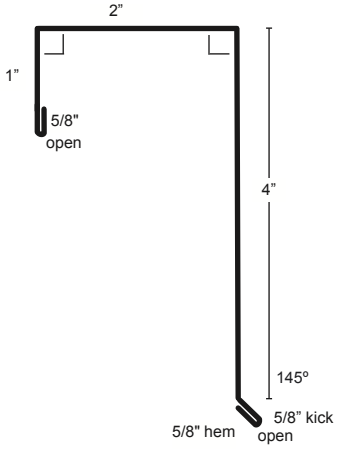
S.O. 9-7/16" Weight: 7.5 lbs.

Gable G-17
SLGG17



S.O. 10-1/8" Weight: 8.1 lbs.

Box Gable
SLTELGB



S.O. 8-7/8" Weight: 7.2 lbs.

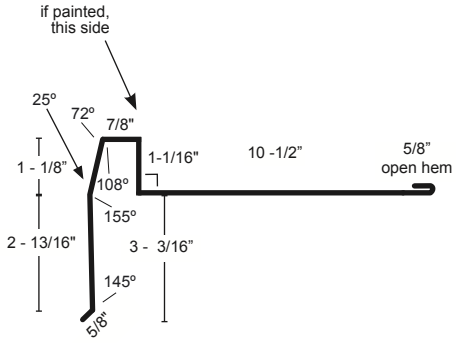
Specifcations subject to change without notice

Standard Flashing Selection

StreamLine (12'6" lengths)

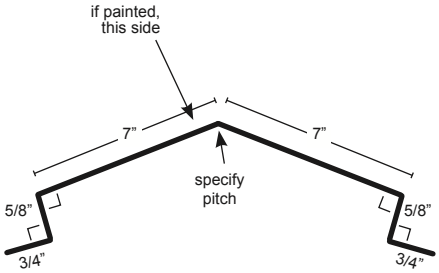
Rev. 1/17

Prow
SLPF



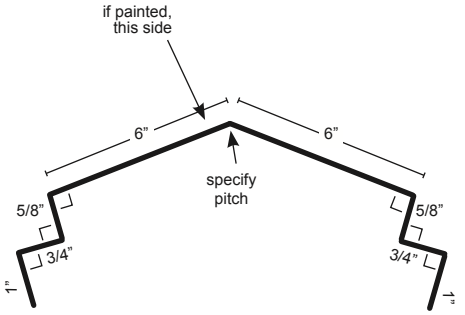
S.O. 17-5/8" Weight: 13.8 lbs.

Ridge Full Vented
SLRFV



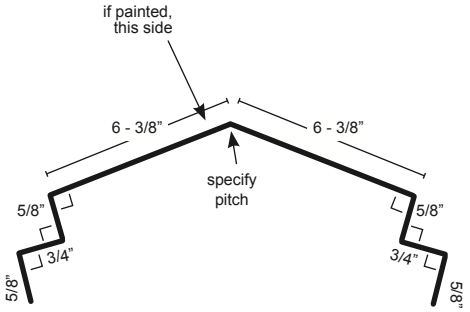
S.O. 16-3/4" Weight: 13.8 lbs.

Ridge Standard (unvented)
SLRS



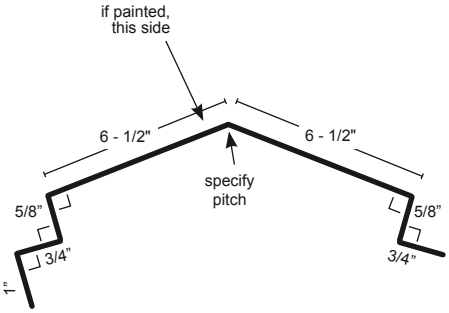
S.O. 16-3/4" Weight: 13.8 lbs.

Ridge Half Vented
SLRHV



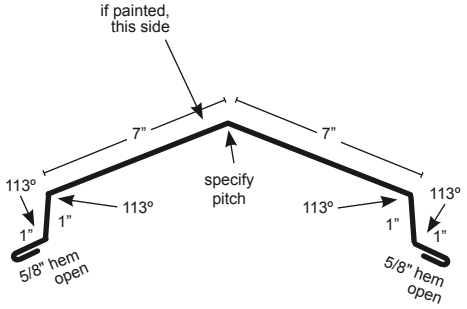
S.O. 16-3/4" Weight: 13.8 lbs.

Ridge Venturi Vented
SLRVV



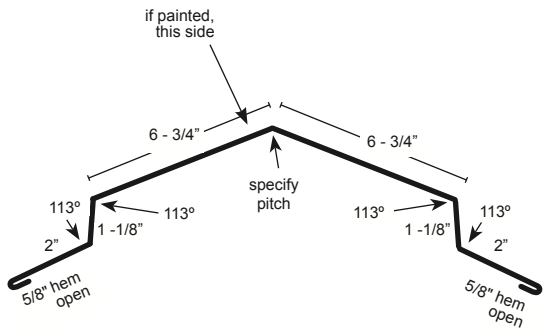
S.O. 16-3/4" Weight: 13 lbs.

Wide Ridge Full Vented
SLRFVW



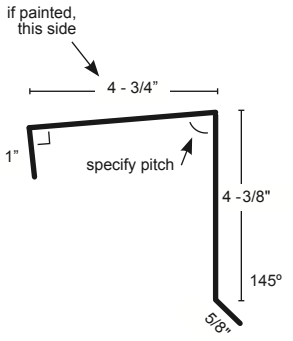
S.O. 19-1/4" Weight: 15.6 lbs.

R-17 Full Vented Ridge
SLR17



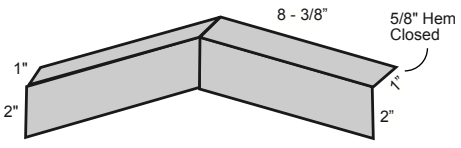
S.O. 21" Weight: 17 lbs.

Ridge End
SLREC



S.O. 10-3/4" Weight: 8.4 lbs.

Ridge Finial
SLRF



S.O. 16-3/4" X 3-1/2" Weight: .34 lbs.

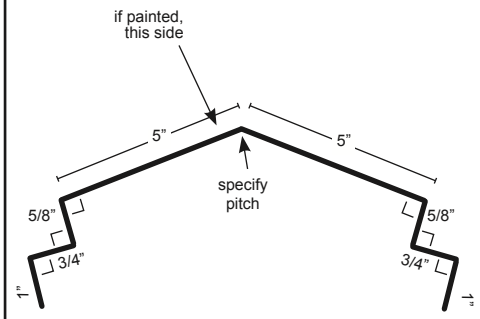
Specifcations subject to change without notice

Standard Flashing Selection

StreamLine (12'6" lengths)

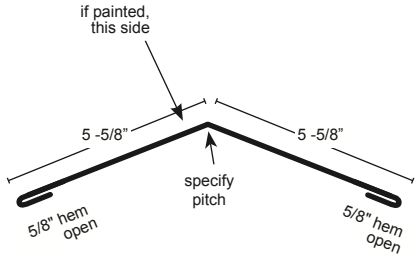
Rev. 1/17

Hip Standard
SLHS



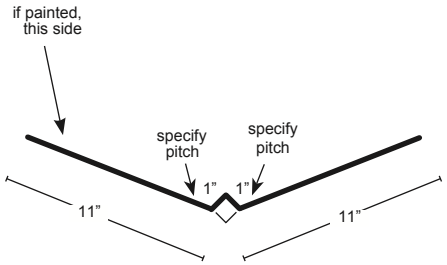
S.O. 14-3/4" Weight: 12.3 lbs.

Hip/Ridge
SLHR



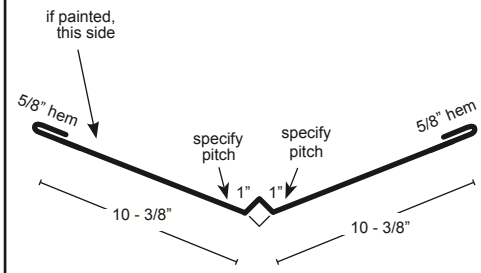
S.O. 12-1/2" Weight: 10.4 lbs.

Valley Flashing 24"
SLVF24



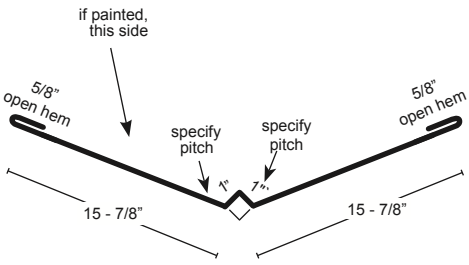
S.O. 24" Weight: 19.9 lbs.

Valley Flashing 24"Hemmed
SLVF24H



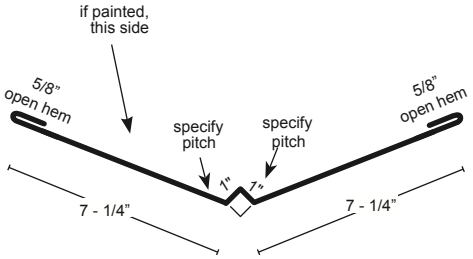
S.O. 24" Weight: 20.4 lbs.

Valley Wide Flashing
SLVFW



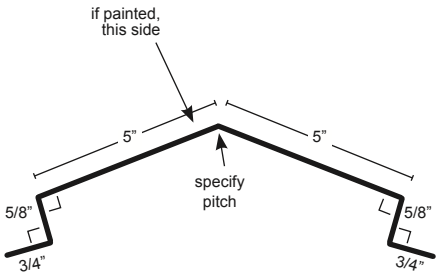
S.O. 35" Weight: 29 lbs.

Valley Flashing
SLVF



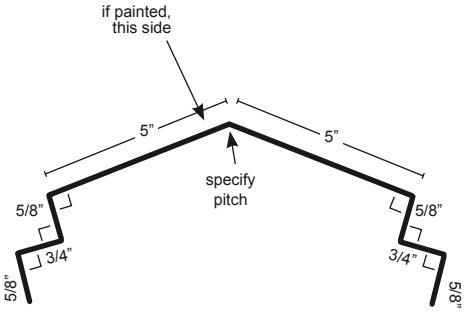
S.O. 17-3/4" Weight: 14.8 lbs.

Hip Full Vented
SLHFV



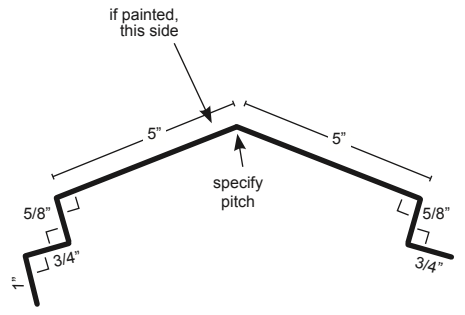
S.O. 12-3/4" Weight: 10.6 lbs.

Hip Half Vented
SLHHV



S.O. 14" Weight: 11.6 lbs.

Hip Venturi Vented
SLHVV



S.O. 13-3/4" Weight: 11.5 lbs.

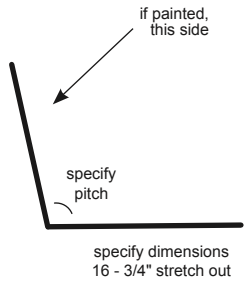
Specifcations subject to change without notice

Standard Flashing Selection

StreamLine (12'6" lengths)

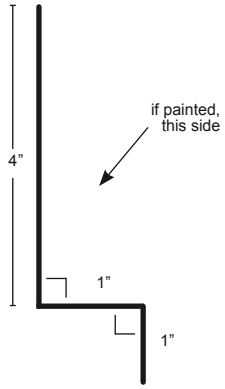
Rev. 1/17

Pan
SLPan



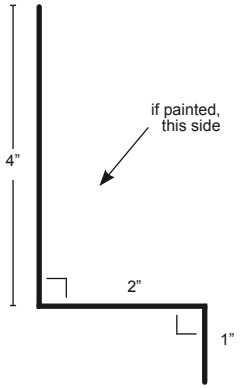
S.O. 16-3/4" Weight: 13.9 lbs.

Sidewall
SLSW



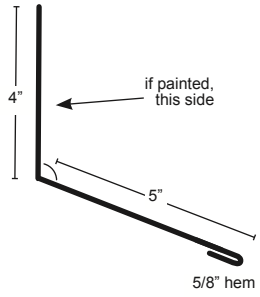
S.O. 6" Weight: 5.1 lbs.

Sidewall Compensating
SLSWC



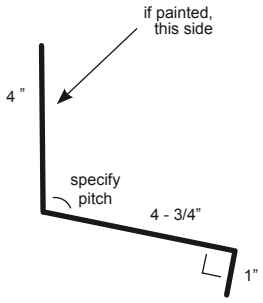
S.O. 7" Weight: 5.9 lbs.

Endwall Standard Hemmed
SLEWH



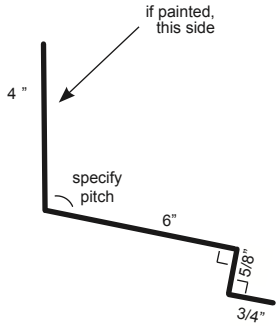
S.O. 9-5/8" Weight: 8 lbs.

Endwall Notched
SLEWN



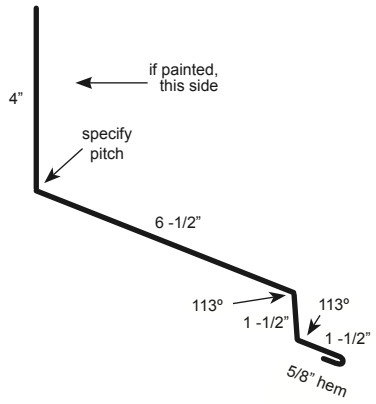
S.O. 9-3/4" Weight: 8.1 lbs.

Endwall-Vented
SLEWV



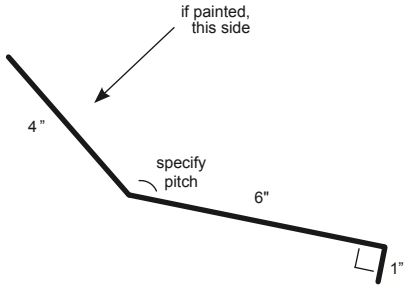
S.O. 11-3/8" Weight: 9.5 lbs.

EW-17 Endwall
SLEW17



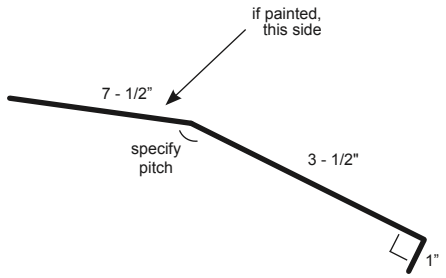
S.O. 14-1/8" Weight: 11.8 lbs.

Pitch Change Inside Notched
SLPCIN



S.O. 11" Weight: 9.3 lbs.

Pitch Change Outside Notched
SLPCON



S.O. 12" Weight: 10 lbs.

Specifcations subject to change without notice

Standard Flashing Selection

StreamLine (12'6" lengths)

Rev. 1/17

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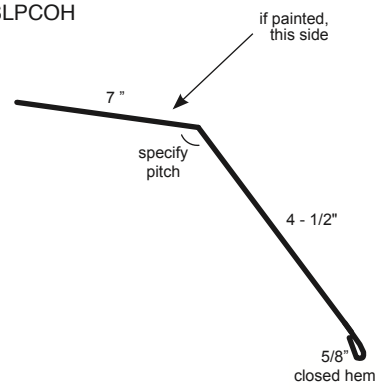
Pitch Change Outside Hemmed

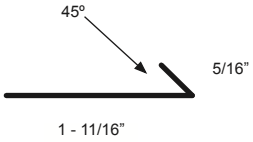
SLPCOH



S.O. 12-1/8" Weight: 10 lbs.

Reversing Strip

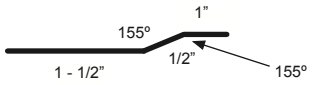
SLSR 24 ga. 10' only



S.O. 2" Weight: n/a

Offset Cleat

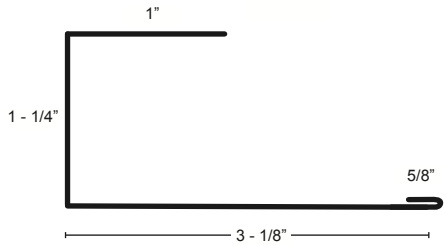
SLOC 24 ga. 10' only



S.O. 3" Weight: n/a *any color

Support Flashing

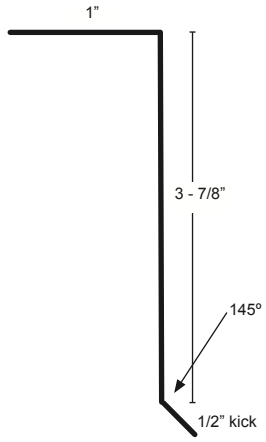
SLSF



S.O. 6" Weight: 7.75 lbs. *any color

4" Box Gable Cleat

SLGCL 24 ga. 10' only



S.O. 5-3/8" Weight: 4.6 lbs. *any color

Specifcations subject to change without notice