

DECRA® Shake XD® & Shingle XD® INSTALLATION GUIDE



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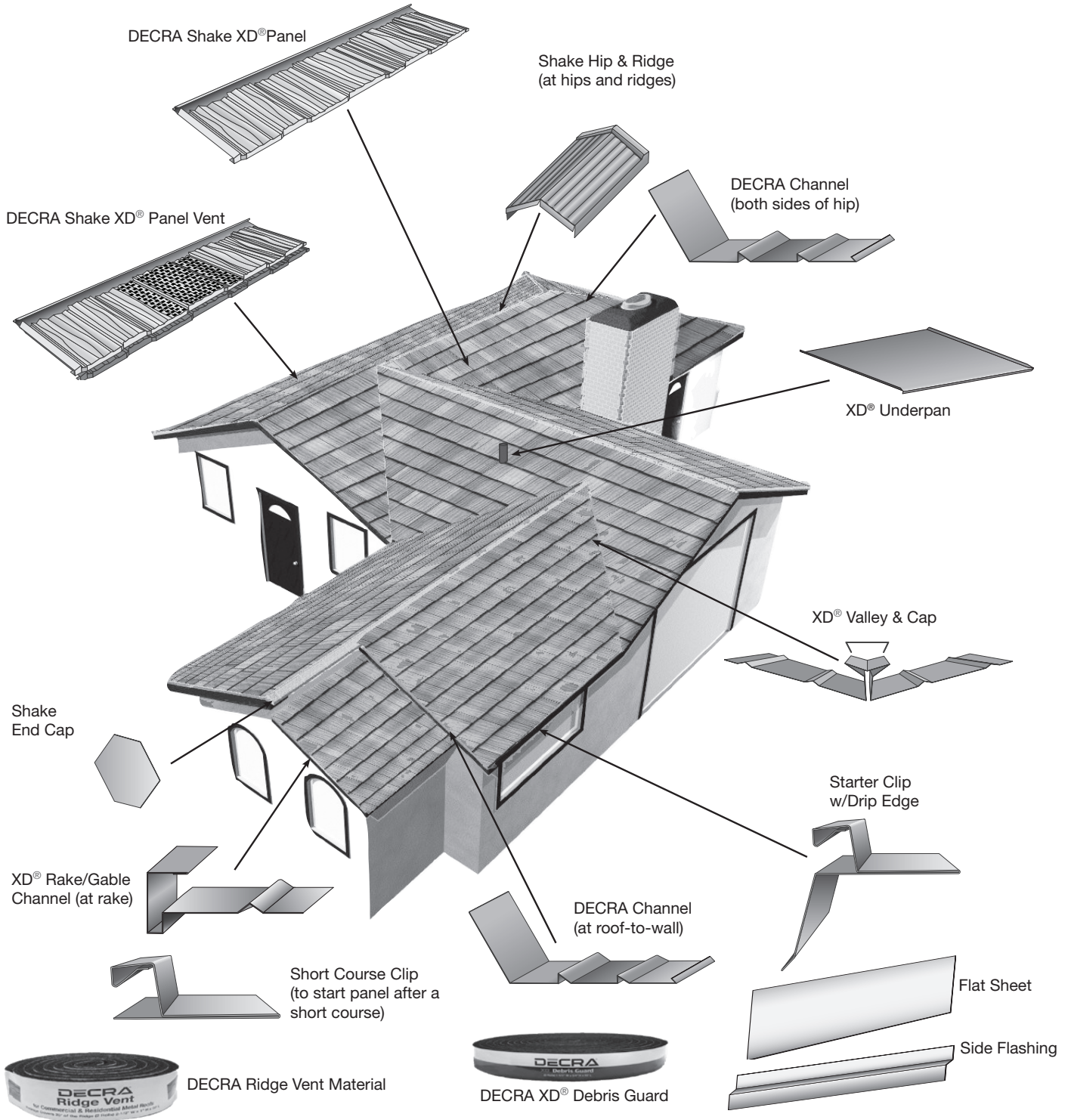
DECRA®
METAL ROOFING

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DECRA Shake XD® Direct-to-Deck

Install Shake XD on roof slopes of 3:12 and greater.

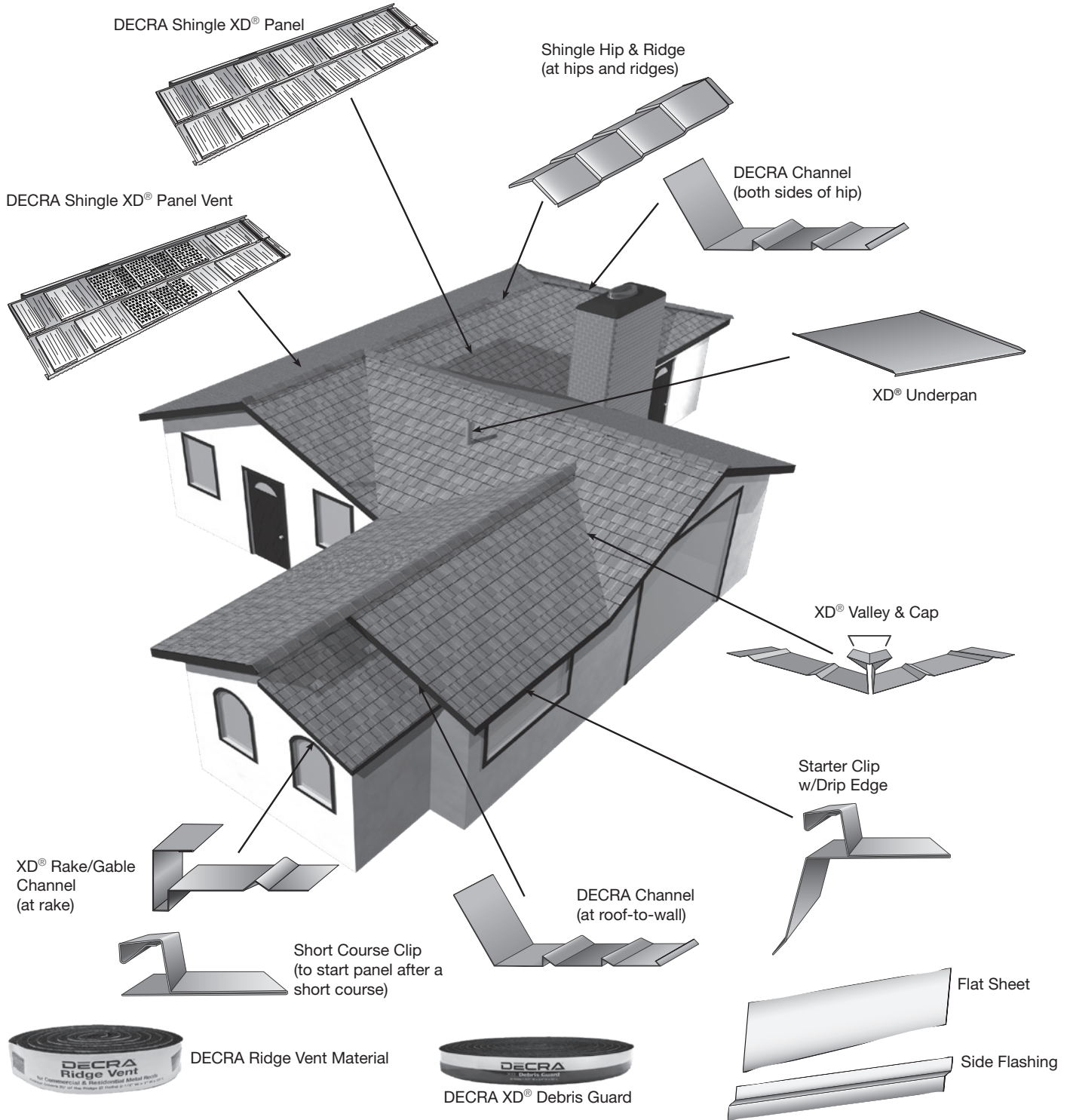


***Use 2 x 2s and / or 1 x 2s at hips and ridges.
Additional build up may be required depending on roof slope.***

DECRA panel vents should be installed on the last full course below the ridge, and no more than 4 feet down from the peak of the roof facet. Panel vents should NOT be used for air intake.

DECRA Shingle XD® Direct-to-Deck

Install Shingle XD on Standard Roof Slopes of 4:12 and greater.



***Use 2 x 2s and / or 1 x 2s at hips and ridges.
Additional build up may be required depending on roof slope.***

DECRA panel vents should be installed on the last full course below the ridge, and no more than 4 feet down from the peak of the roof facet. Panel vents should NOT be used for air intake.

Introduction

The instructions and drawings included here are intended only as a guide for the installation of DECRA Roofing Systems' XD profiles. The materials and methods specified help maintain the overall integrity of the roofing system. These instructions are not intended to address all aspects of roofing installation; a quality installation is ultimately dependent upon the workmanship of the roofing contractor. Information regarding alternative situations not covered in these instructions can be obtained by contacting DECRA Roofing Systems.

Safety

Adhere to recommended safe roofing practices. Wear appropriate clothing and use safety equipment, such as protective eyewear. Light, soft-soled shoes are recommended. Use proper tools and keep the roof clear of debris as you work.

Tools

DECRA panels and components are best cut with tin/aviation snips, a steel roof panel cutter shear, or a power saw with a 'cool cut' metal-cutting blade.

In all cases, wear eye protection!



Cordless Drill



Aviation or Tin Snips



Circular Saw



Hand Bender



Table Saw

Estimating Sheet

The DECRA Shake XD and DECRA Shingle XD Estimating Sheets are available at [DECRA.com](https://www.decra.com).

Codes & Requirements

Refer to local codes and/or ICC Reports. A link to DECRA ICC reports is available at [DECRA.com](https://www.decra.com).

Roof Slope

Install Shake XD on roof slopes of at least 3:12 or install Shingle XD on roof slopes of at least 4:12. Roof slopes less than 3:12 for Shake XD or 4:12 for Shingle XD are considered decorative and panels must be applied over a roof system complying with local codes. Anything below 2:12 should be prohibited even though it is considered decorative.

Underlayment

One layer of Underlayment is required before installing ALL DECRA products in both New Construction and Reroofing applications.

Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 4869, Type I or II or ASTM D 1970. Check local code requirements as ice and water shield and additional requirements may apply.

Deck Preparation

The deck must be level and square for proper installation. If it is not, shim to make any adjustments. It is required that a layer of underlayment be used before applying the XD panels.

New Construction: Prepare roof deck to meet local building codes.

Re-Roof Tear-off (Skip/Spaced Sheathing) or Over Asphalt Shingles: If tearing off old roof, clean and prepare deck to meet local building codes.

Panels may be installed over existing asphalt shingle or applied over existing spaced sheathing provided the space between the boards is filled as necessary to provide a base for fastening.

If installed over existing asphalt shingles, cut shingles back from the eaves and rake/gable edges approximately 8” or enough to allow for the Starter Clip w/Drip Edge and XD Rake/Gable Channel to be installed properly. Remove existing hip and ridge material. In situations where code allows re-roofing over 2 layers of asphalt shingles, follow the local code.

Fasteners

Screws: Use a minimum of at least 5 corrosion resistant screws minimum #9 Hex (1/4” hex head) x 1-1/2” long. Use fasteners of sufficient length to penetrate through the sheathing (deck) by at least 1/2”. Recommended length is 1-1/2” long. High Wind details, see website.

Venting Preparation

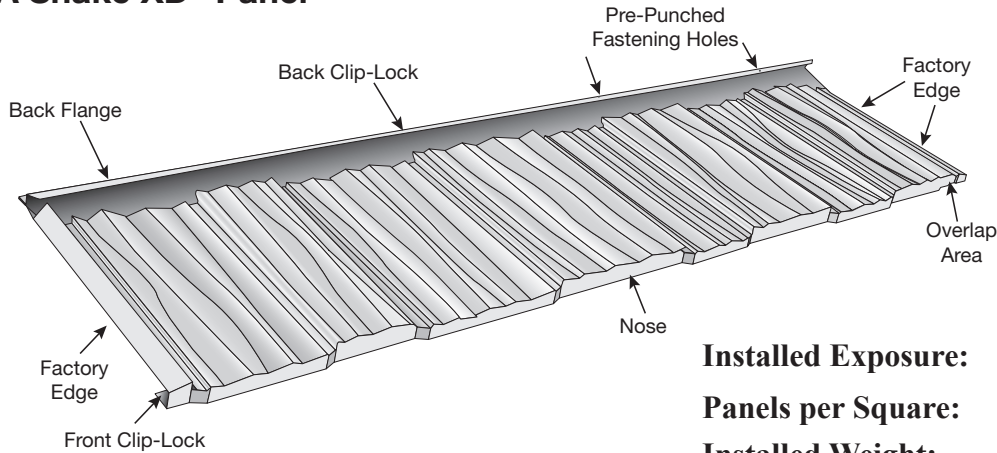
If using DECRA Ridge Vent material, prepare the deck for ridge venting (without center beam) by cutting both sides of the plywood 3/4” from the center of the ridge to expose attic space, or as required by local codes. Refer to Venting section or DECRA Ridge Venting wrapper for additional installation details. If DECRA Panel Vents will be used, *See Panel Installation - Installing Panel Vents and Venting.*

Measuring and Cutting Panels

Measuring: Measurements are made on the roof, however, the panels are normally marked and cut on the ground. Panels may be cut with a table saw or circular saw with a ***‘cool-cut’ metal-cutting blade*** or tin snips. ***Cut roof panels and accessories must have residue and all metal shavings completely removed, especially metal shavings on the roof.***

Panels: The DECRA panels are formed from corrosion resistant aluminum-zinc alloy coated steel with a protective coating of ceramic coated stone granules that provide an attractive appearance. The Shake XD and Shingle XD stone coated accessory/components are produced in a similar manner. The other accessories/components are also produced in the same manner, but are not stone coated.

DECRA Shake XD® Panel

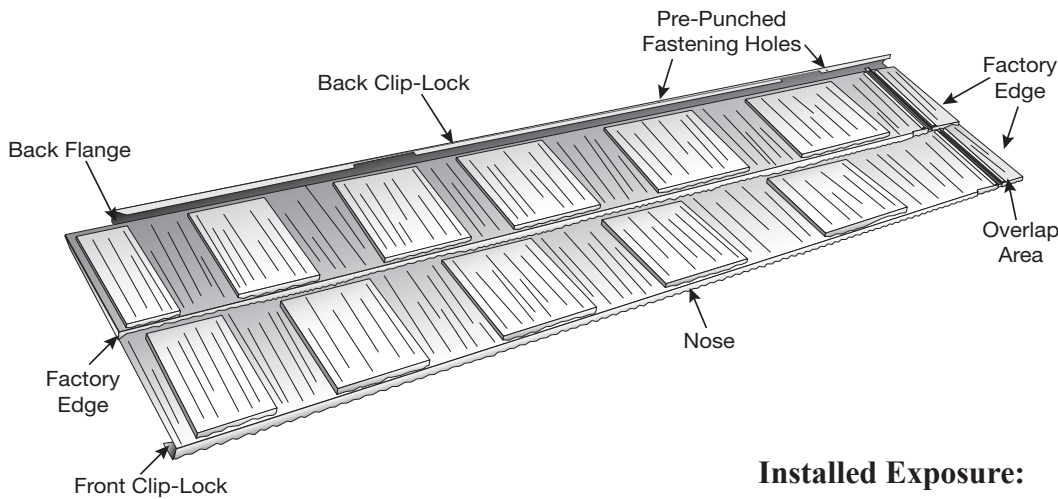


Installed Exposure: 12-3/8" x 49-7/8"

Panels per Square: 23.4

Installed Weight: 150 lbs./square

DECRA Shingle XD® Panel



Installed Exposure: 12-1/4" x 49-1/2"

Panels per Square: 23.8

Installed Weight: 150 lbs./square

XD panels are not designed to be installed over irregular surfaces.

Use a random pattern from course to course for best overall appearance.
Avoid creating a pattern with the light or dark color patches unless it is aesthetically pleasing.
Do not rack panels. Do not create a pattern.

***Do not use LEAD or COPPER with this steel roofing system because they are dissimilar metals and are not compatible.
Do not use pressure treated lumber i.e. decking or batten.***

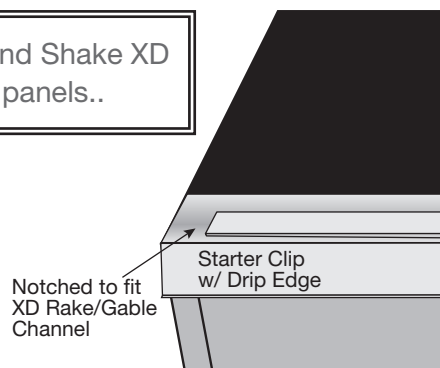
Preparation for Panel Installation

Pre-paint vertical/exposed portion of DECRA Channel, XD Valley and Shake XD or Shingle Rake/Gable Channels as needed prior to installing panels..

Starter Clip with Drip Edge: Use the Starter Clip with Drip Edge along the eaves. Paint along drip edge area of Starter Clip with Drip Edge to match fascia.

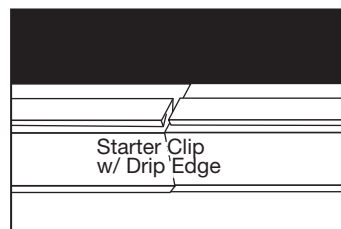
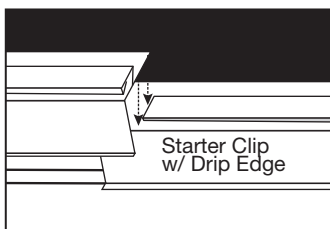
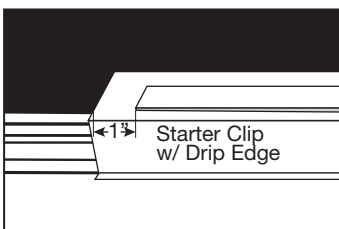
Prior to fastening the Starter, cut the top clip where it meets the rake/gable, valley, roof-to-wall and hips to allow for installation of the channels and valley. Cut back the top clip approximately 4" for XD Rake/Gable Channel, 6-1/2" for DECRA Channel at roof-to-wall and hips and cut back clip enough to accommodate XD Valley. All channels and valleys must be installed over the Starter Clip and extend 1" over fascia or onto the panel below.

Notch and overlap Starter pieces 1" when joining two pieces together. Fasteners should be spaced 6" on center. Do not screw through overlap (see diagrams below).



Starter Clip Notching, Cut-Back Top Clip at:

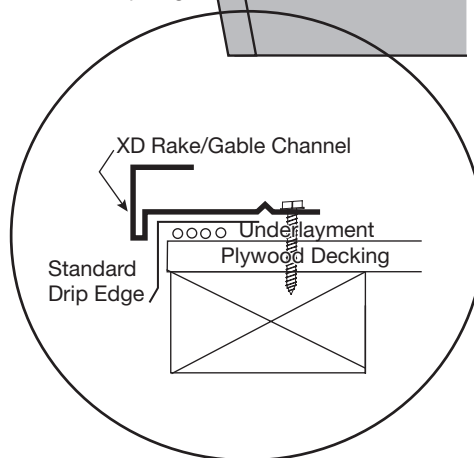
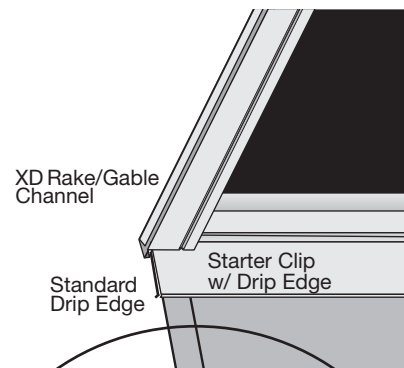
- Rake/gable
- Valley
- Roof-to-wall and hips



Rake/Gable Channel: Standard metal drip edge should be installed along all rake/gable edges. Position and fasten the XD Rake/Gable Channel directly over the existing drip edge.

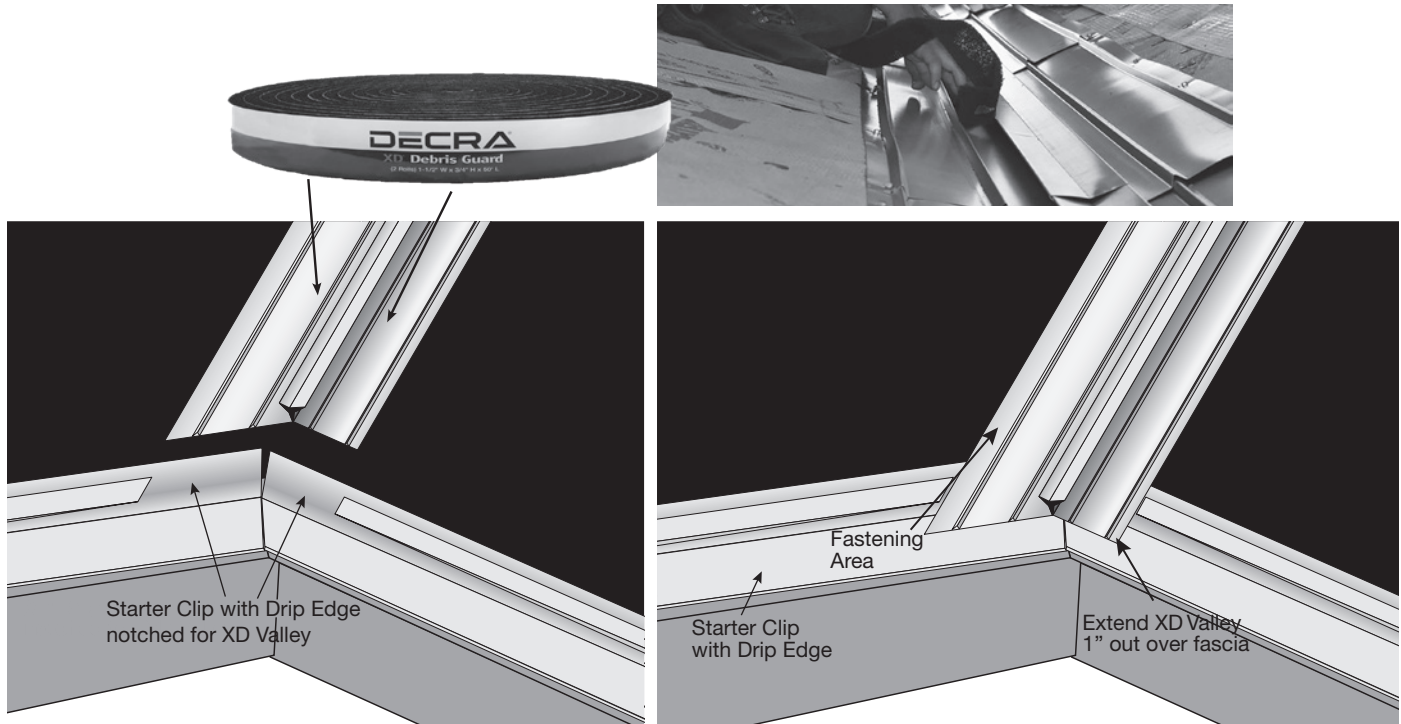
Cut the XD Rake/Gable Channel so that it installs over the Starter Clip with Drip Edge and hangs 1" past the eave. Notch and overlap XD Rake/Gable Channel pieces 1-1/2" when joining two pieces together. Notch the top channel to allow it to slide into the lower channel. The top channel should lay on top of the lower channel. Fasteners should be spaced 6" on center. Do not screw through overlap (see diagram).

In areas where debris is present, install DECRA XD Debris Guard prior to installing XD panels. Roll the XD Debris Guard into the XD Rake/Gable Channel. Remove the white paper while unrolling to expose the adhesive dots and press into place.



XD Valley: The XD Valley must be positioned along the center line of each valley area. Place the valley so that a minimum 1” runs past the edge of the eave. Continue to install the valley metal overlapping the pieces a minimum of 6”. Fasteners should be positioned outside the last turn-up on each side. Finish with Valley Cap. The Valley Cap (stone coated) can be installed by snapping or sliding into place either before or after the valley pieces have been installed. Fasten the first Valley Cap with a stitch screw to Valley at the 1” overhang along eave. Additional Valley Caps will tuck into one another moving up the Valley.

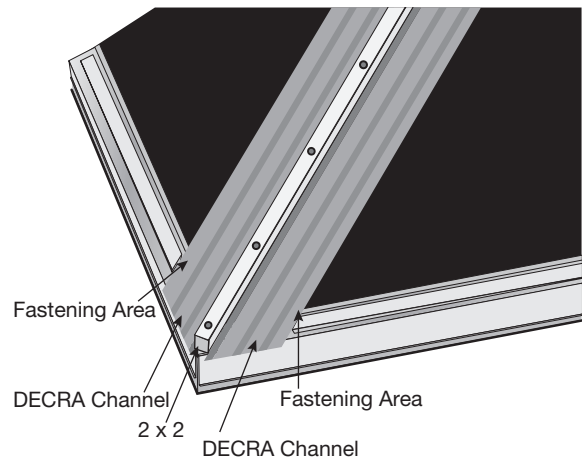
In areas where debris is present, install DECRA XD Debris Guard prior to installing the XD panels. Roll the Debris Guard into both sides of the XD Valley. Remove the white paper while unrolling to expose the adhesive dots and press into place.



DECRA Channel (Along Both Sides of Hips): Install one 2 x 2 along the center of the hip line. Attach the DECRA Channel on either side of the 2 x 2’s. Fasten the DECRA Channel on the outside of the outer bump with fasteners every 12”. **Recommendation:** apply roof sealant to fastener heads. Make sure the end of the DECRA Channel extends a minimum of 1” past the eave line. The top of the Starter Clip w/ Drip Edge will also need to be cut back to allow the DECRA Channel to lay flat onto the deck. Overlap Channel pieces a minimum of 6”.

Pre-paint visible vertical/exposed portion of DECRA Channel as needed prior to installing panels.

Use 2 x 2s and 1 x 2s as needed at hips. Additional build up may be required depending on roof slope.

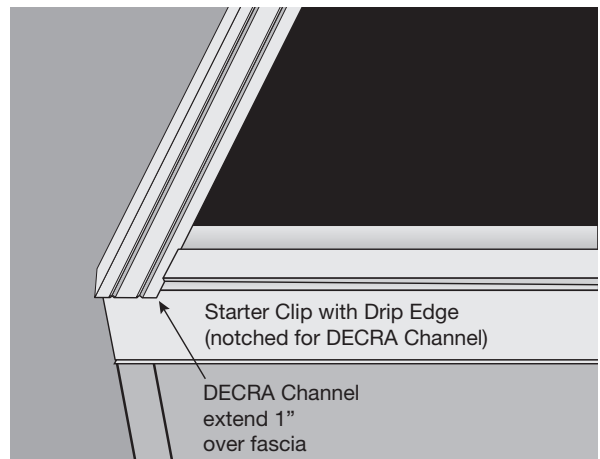
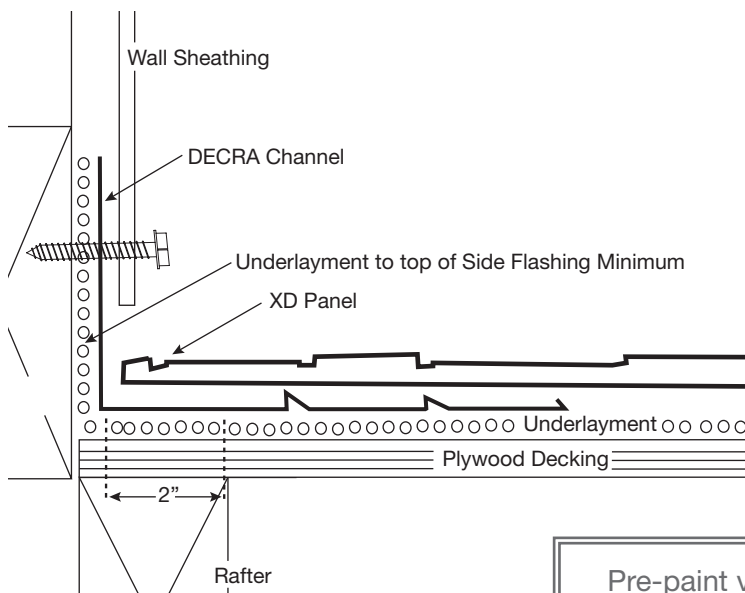


Roof to Side Wall w/Side Flashing: Starting at the eave, extend the DECRA Channel 1” past the eave over the Starter Clip. Work the DECRA Channel behind stucco or wood siding whenever possible or surface mount to the wall for surfaces like brick and seal with wall flashing. Stone coated counter flashing can also be used. Overlap the DECRA Channel at least 6” working up the roof. Screws should be spaced every 12”. **Recommendation:** apply roof sealant to the fastener heads.

If standard wall flashing is present, tuck DECRA Channel behind existing flashing. If no existing flashing is present, counter flash with Side Flashing. Seal DECRA Channel to the wall with roofing grade sealant/adhesive. Apply sealant to the Side Flashing before attaching to the wall.

Cut the XD panel to length and fit into the DECRA Channel flashing at the roof-to-wall. Make a 2” notch at the front and back Clip-Locks where the panel fits into the DECRA Channel.

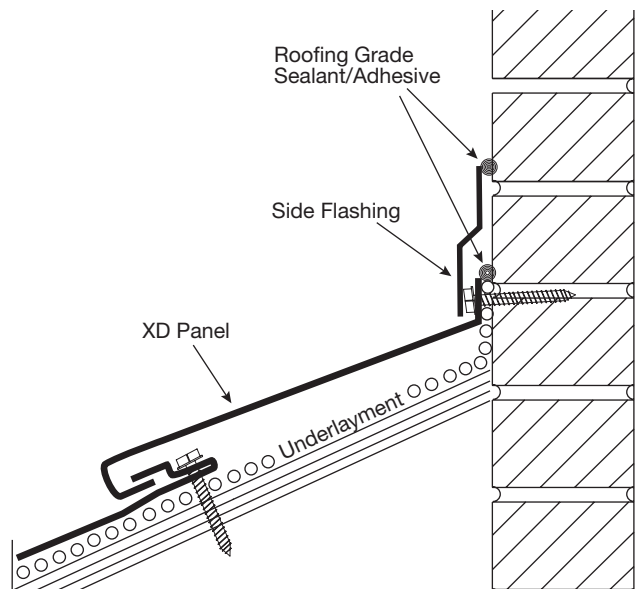
Lock the panel into place and screw down outside the second water channel.



Pre-paint vertical/exposed portion of DECRA Channel as needed prior to installing panels.

Roof to Head Wall: Start by measuring from the full panel below the wall. Cut panels to fit this area allowing for a minimum of a 1” bend up at the top. Using a hand bender, bend each panel up against the head wall and fasten the panel to the head wall.

For brick and stucco, counter flash and seal across the head wall. For siding, tuck the panel metal underneath the siding and seal with roofing grade sealant/adhesive.



Roof Penetrations – Pipes & Vents

Roof penetrations should be flashed by installing standard roof jacks over a corrosion resistant DECRA Underpan which drains over the panel immediately below or as required by code.

Use the Shingle/XD Underpan to properly flash pipe penetrations. Cut the Underpan to fit tightly around the plumbing stack. The Underpan must fit tight over the lower field panel when positioned around the pipe.

Install the pipe-flashing apron so it fits onto the Underpan. Apply roofing grade sealant/adhesive on top and both sides. Finish with field panel by measuring and cutting panel to fit tight around pipe flashing. Make a 2” wide notch along the front Clip-Lock of the XD panel covering the jack.

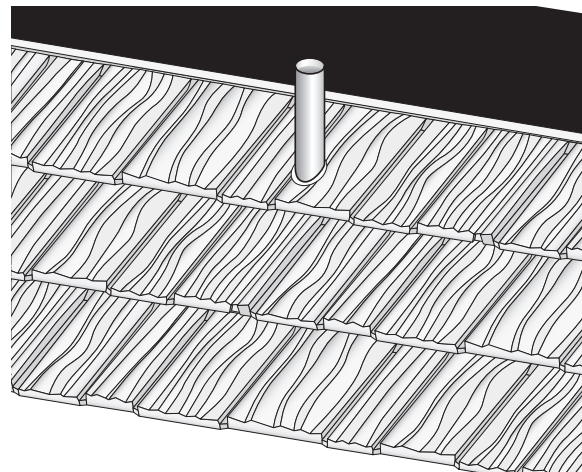
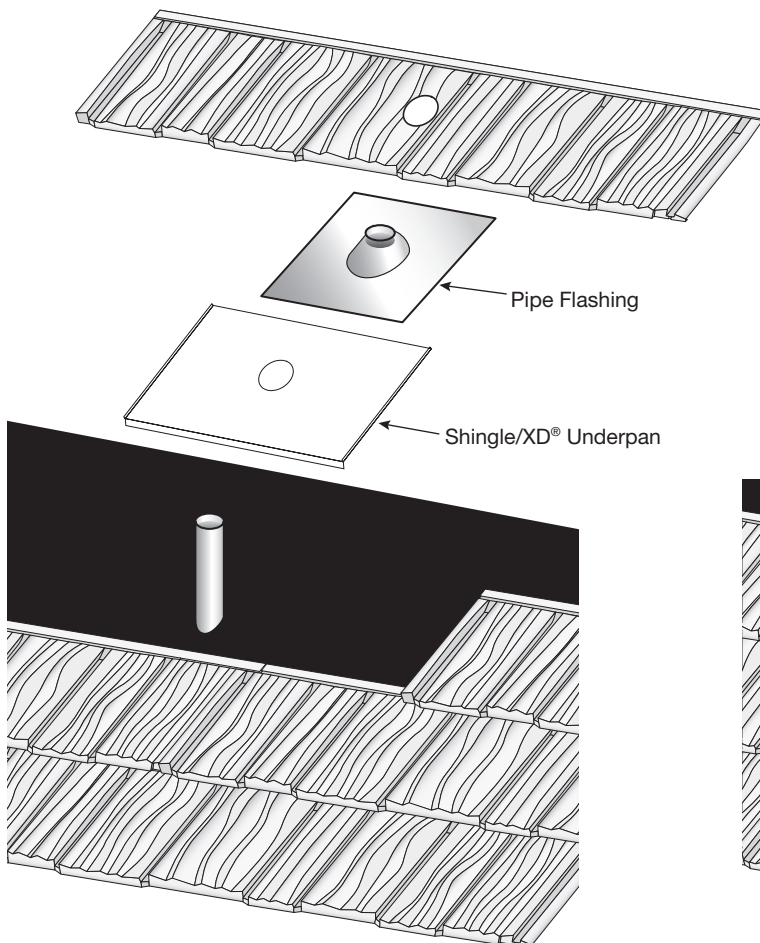
Cut hole in panel according to flashing profile. Align roofing panel and seal around base using a roofing grade sealant/adhesive and finish with Touch-Up Kit.

Care should be taken to adequately weatherproof the flashings and to support them with additional blocking or roof framing as necessary.

Paint pipes and flashings prior to installing panels.

In some cases, for larger flashings, more than one Shingle/XD Underpan may be required.

Roofing grade sealant/adhesive should be used. Silicone caulking is not recommended for use in direct sunlight.



Do not use LEAD or COPPER with this steel roofing system.

Chimneys, Skylights & Dormers

The following steps detail the procedure for installation around a chimney, skylight or dormer. Run full panels up to the bottom of the penetration as noted in the Chimney Illustration below. All the open areas will be filled in with cut panels.

1 Start by measuring from the full panel below the chimney. Cut panels to fit this area and install like at roof to head wall. *See Roof to Head Wall.*

2 **3** Use the DECRA Channel along the left and right of the chimney and counter flash with Side Flashing. Extend the DECRA Channel 2-3" out over the top of the first panel below the chimney. *See Roof to Side Wall*

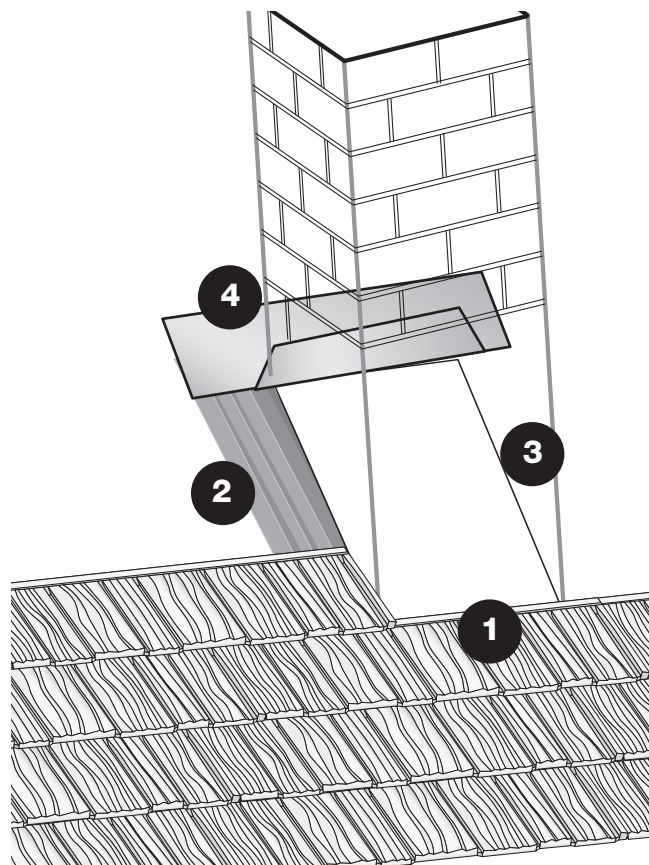
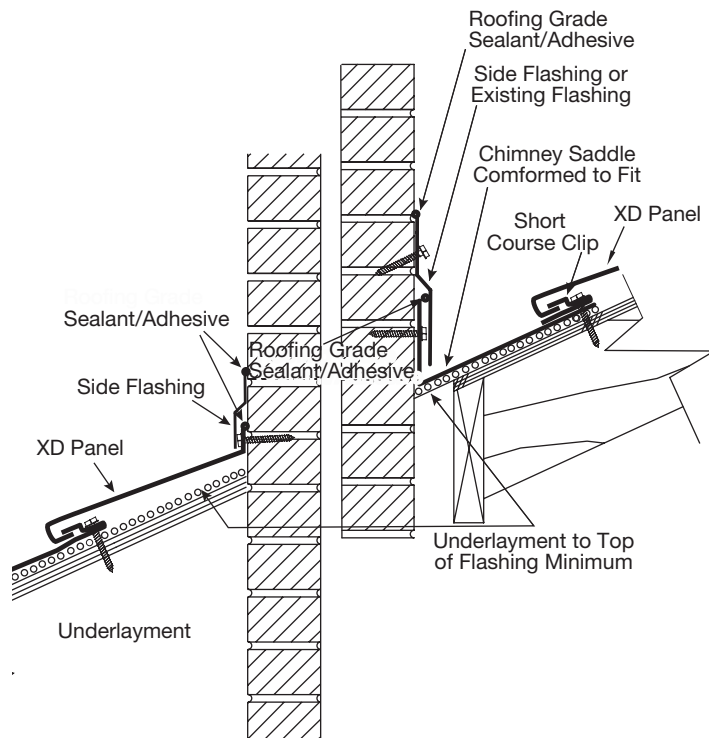
Panels to fit the left and right sides of the chimney will be measured, cut and fit into the DECRA Channel, similar to the roof to side wall. Be sure to notch out the top and bottom clip as was done for the Roof to Side Wall detail. *See Roof to Side Wall.*

4 The area directly above the chimney must be flashed and counter flashed. Measure the width of the chimney. Use a chimney saddle (**do not use lead or copper**) or a piece of flat metal can be cut and bent to fit around the chimney. Cut, conform and install the chimney saddle to fit above the chimney.

In the case of a cricket above the chimney, finish like valley. *See Valley.*

Next, cut a piece of the Short Course Clip to fit the length of the top of the chimney with an added 6" on either side. Attach the Short Course Clip on either side of the top of the chimney so the clip will allow the XD panel to engage into the clip as close to the top of the chimney as possible.

For brick and stucco, counter flash over the top of the chimney saddle. For siding, tuck the chimney saddle up under the siding. Use closure foam to fill gaps as needed (see diagram above).



Panel Layout, Panel Overlap & Fastening

Panel Layout: XD Panels (Shake XD and Shingle XD) install left to right. For first course, start with a full panel at the left side rake edge, valley or hip and continue with full panels locking them into the Starter Clip w/ Drip Edge. For second and subsequent courses, randomly install panels. **Do not create a pattern.** All subsequent courses of panels simply lock into place by sliding the nose of each panel onto the clip that is formed at the top back edge of each panel in the row below.

The side of each panel must be pushed into position to engage the Side-Lap locking mechanism.

Install the 4 screws into the predrilled fastening positions on the left of the panel leaving the 5th fastening position, on the far right of the panel, without a fastener. Properly lap the next panel to the right of the panel and insert at least one fastener. Now go back and insert the fifth fastener in the panel to the left.

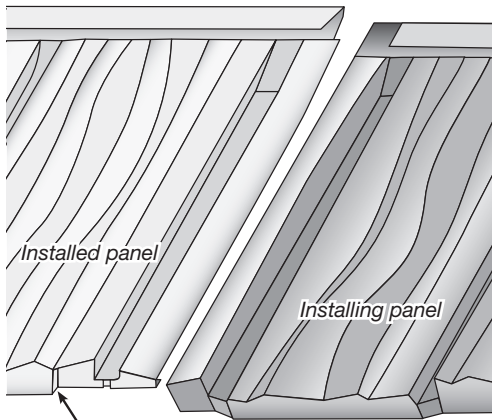
Panel Overlap:

Shake XD: Shake XD panels overlap 2-1/2". Ensure that top left corner of installing panel is butted up tight into upper clip of installed panel. Do not install the last screw on the far right until the next panel has been properly lapped and at least one screw attached.

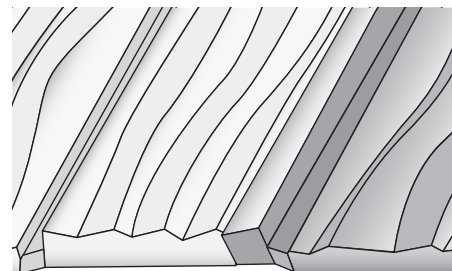
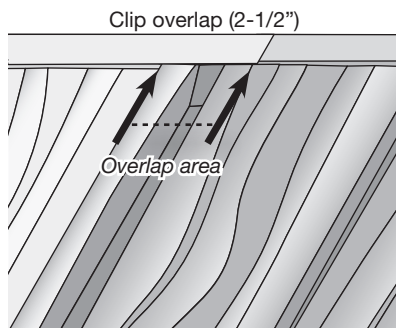
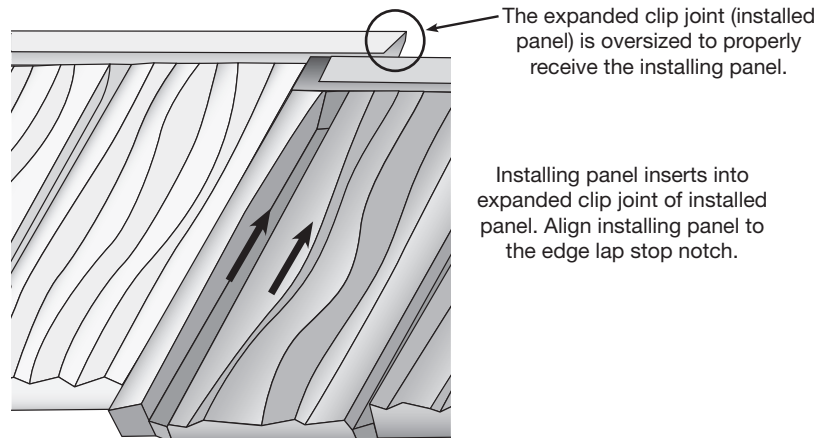
Shake XD Panel Overlap:

DECRA Shake XD Panels install from LEFT to RIGHT. Install panels randomly, staggering sidelaps. Avoid creating a pattern with the light or dark color areas unless it is aesthetically pleasing.

Panels install left to right. The installing panel (on right) will overlap the installed panel (on left).



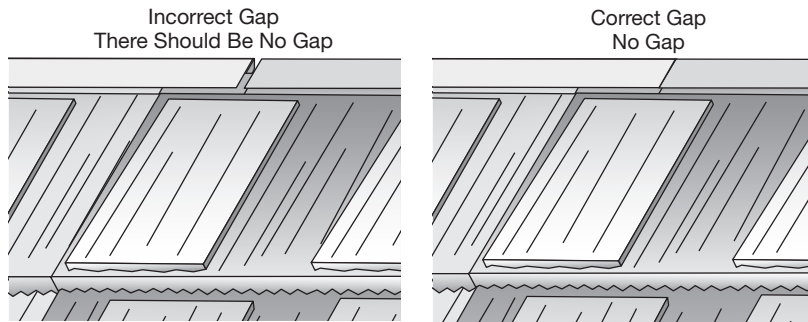
Overlap stop-notch



Align installing panel with the stop-notch located 2-1/2" in from lower-right panel corner.

Shingle XD Panel Overlap:

Shingle XD: There should not be a gap between Shingle XD panels. Do not install the last screw on the far right until the next panel has been properly lapped and at least one screw attached.



DECRA Shingle XD Panels install from LEFT to RIGHT. Install panels randomly, staggering sidelaps. Avoid creating a pattern with the light or dark color patches unless it is aesthetically pleasing.

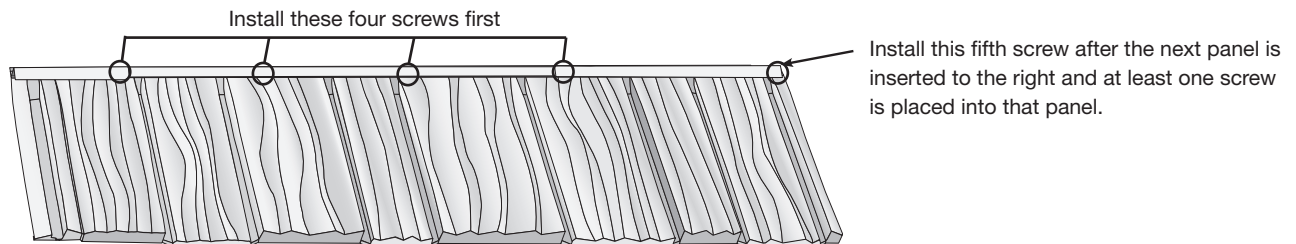
Panel Fastening: Install the four screws on the left side of the panel first, then lay the next panel to the right overlapping the panel to the left. Install at least one screw into the panel on the left prior to installing the fifth screw into the right side of the panel (*see diagrams below*).

Shake XD Panel Fastening:

FASTENERS:

Shake XD Panels - Min #9 Hex (1/4" hex head) x 1-1/2" long Corrosion Resistant Screws

Shake Hip & Ridge - Min #9 Hex (1/4" hex head) x 1-1/2" long Corrosion Resistant Screws
(color coordinated)

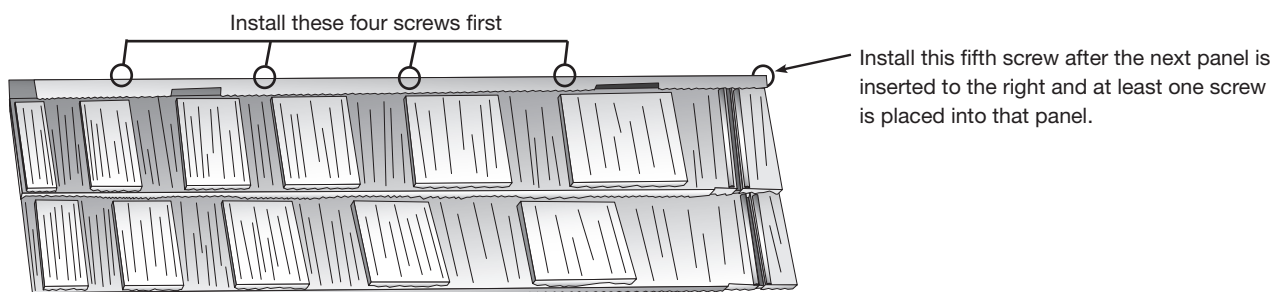


Shingle XD Panel Fastening:

FASTENERS:

Shingle XD Panels - Min #9 Hex (1/4" hex head) x 1-1/2" long Corrosion Resistant Screws

Shingle Hip & Ridge - Min #9 Hex (1/4" hex head) x 1-1/2" long Corrosion Resistant Screws

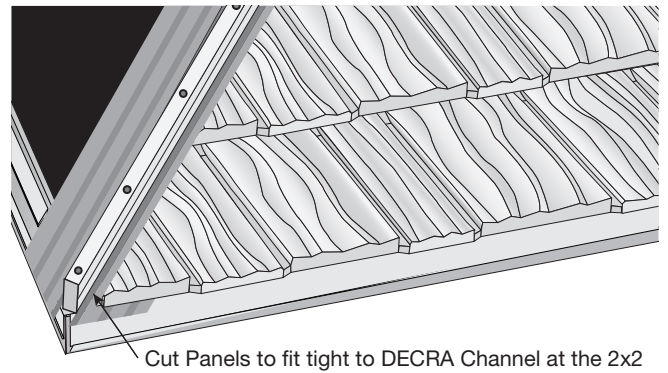
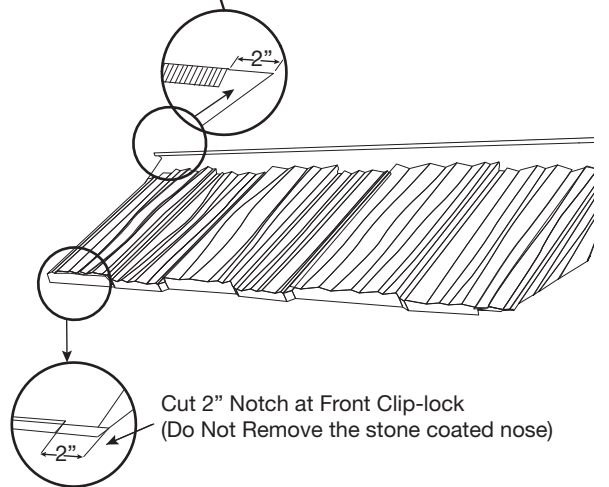
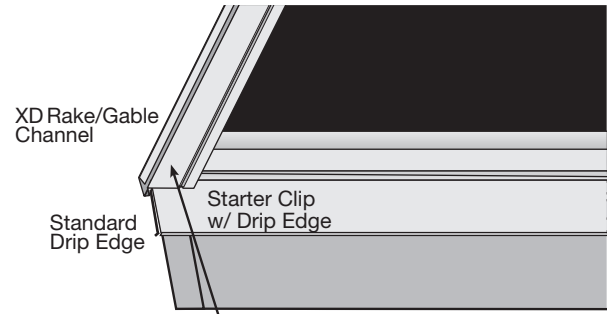


Panel Installation

Panels at Rake/Gable, Hips and Valley:

Where the panels fit into the Shake XD or Shingle Rake/Gable Channel, DECRA Channel or XD Valley, proper drainage will be attained by removing a portion of the front and back Clip-Locks on each XD Panel as noted below. Panels should be installed from left to right starting to the left of the Rake/Gable Channel, XD Valley or DECRA Channel. Cut and fit panels into Rake/Gable Channel, XD Valley or DECRA Channel as needed to create random stagger.

Panels at Rake/Gable: Where the XD panels fit into the XD or Rake/Gable Channel, proper drainage will be attained by removing 2" from the front and back Clip-Locks on each panel. Make a 2" notch at the front and back Clip-Locks where the panel fits into the DECRA Channel. Lock the panel into place and screw down.

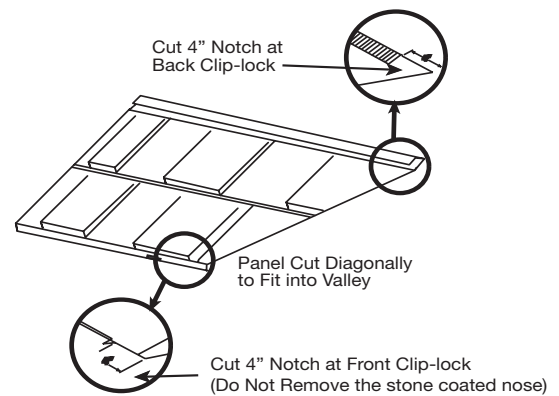
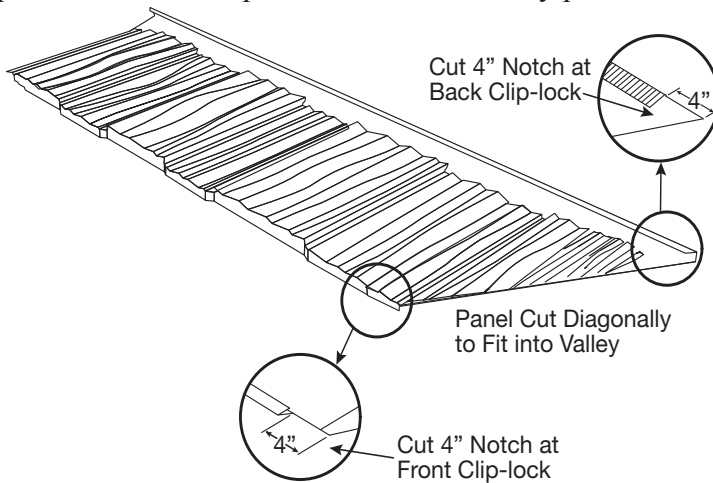


Do not fasten panels into the inner-water channel on the Rake/Gable Channel, DECRA Channel or XD Valley.

Panels at Hips: Along both sides of the hips, cut XD Panels to fit into the DECRA Channel. Make a 2" notch at the front and back Clip-Locks where the panel fits into the DECRA Channel. Lock the panel into place and screw down.

Alternative Installation Method for Panels at Hips, Rakes/Gables and Sidewalls on pg. 20

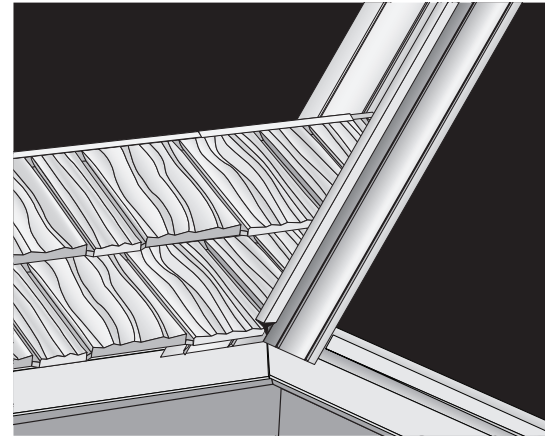
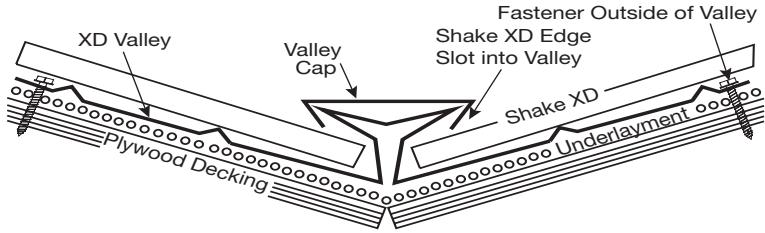
Panels at Valley: At the XD Valley, cut panels to length and make a 4" notch at the front and back Clip-Locks where the panels fit into the Valley piece.



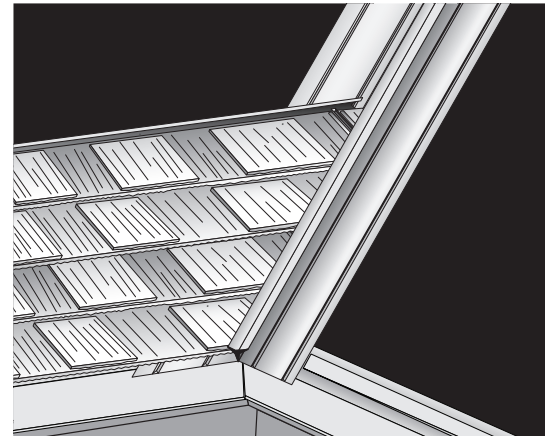
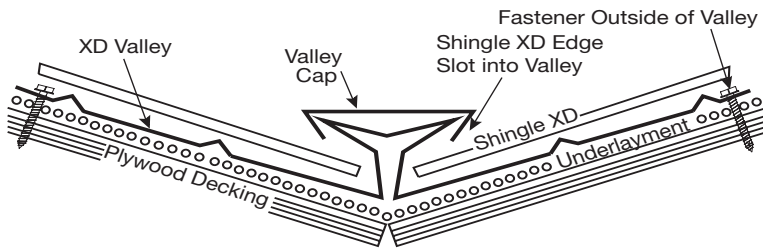
Do not remove the stone coated nose.

Panels at Valley (con't):

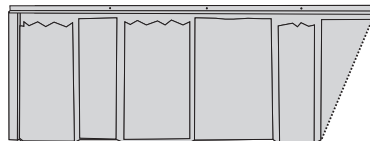
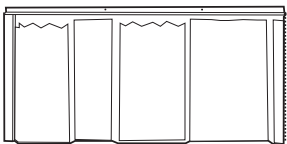
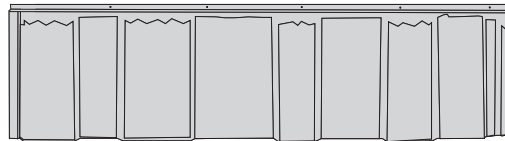
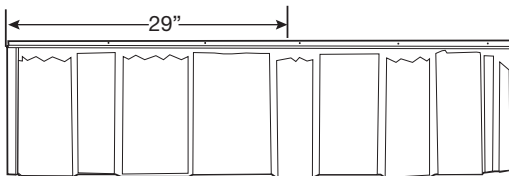
Shake XD - Use XD Valley & Cap



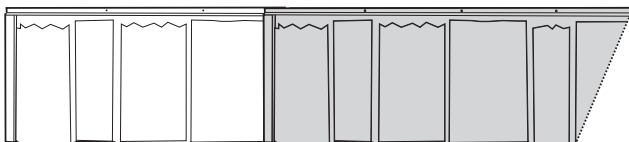
Shingle XD - Use XD Valley & Cap



Installing Small Cut Panels: In this situation, cut the last full panel down to 29" to allow you to finish the course run with a longer panel. On the 29" panel, you must use the factory left edge as shown in the diagram below. **For Shingle XD:** on the 29" left panel that has just been shortened, cut out the right side bottom clip 2-1/2". Install the right side panel into the left panel clip as is normally done. **For Shake XD:** on the 29" left panel that has just been shortened, cut the right side bottom clip 2-1/2". An additional 2" cut must be made to the right side top clip lock on the 29" panel to allow the panel clip locks to butt together and form the overlap joint. Install the right side panel into the left panel clip as is normally done.

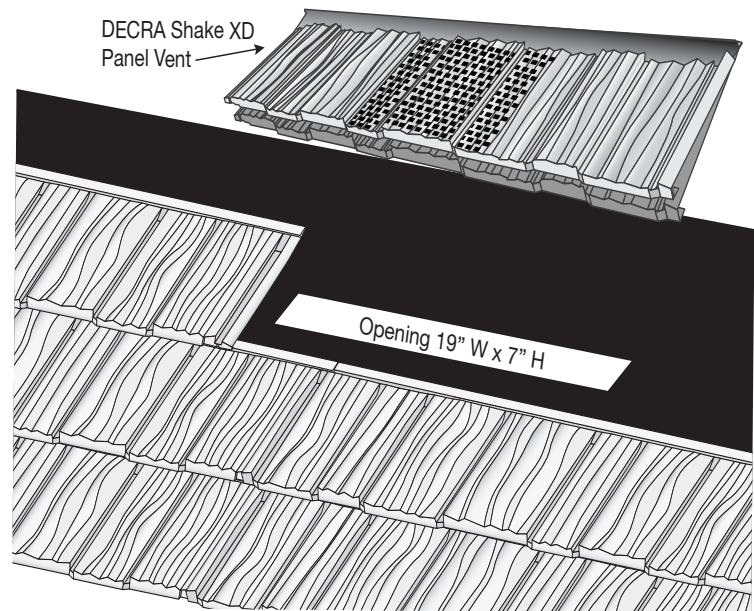
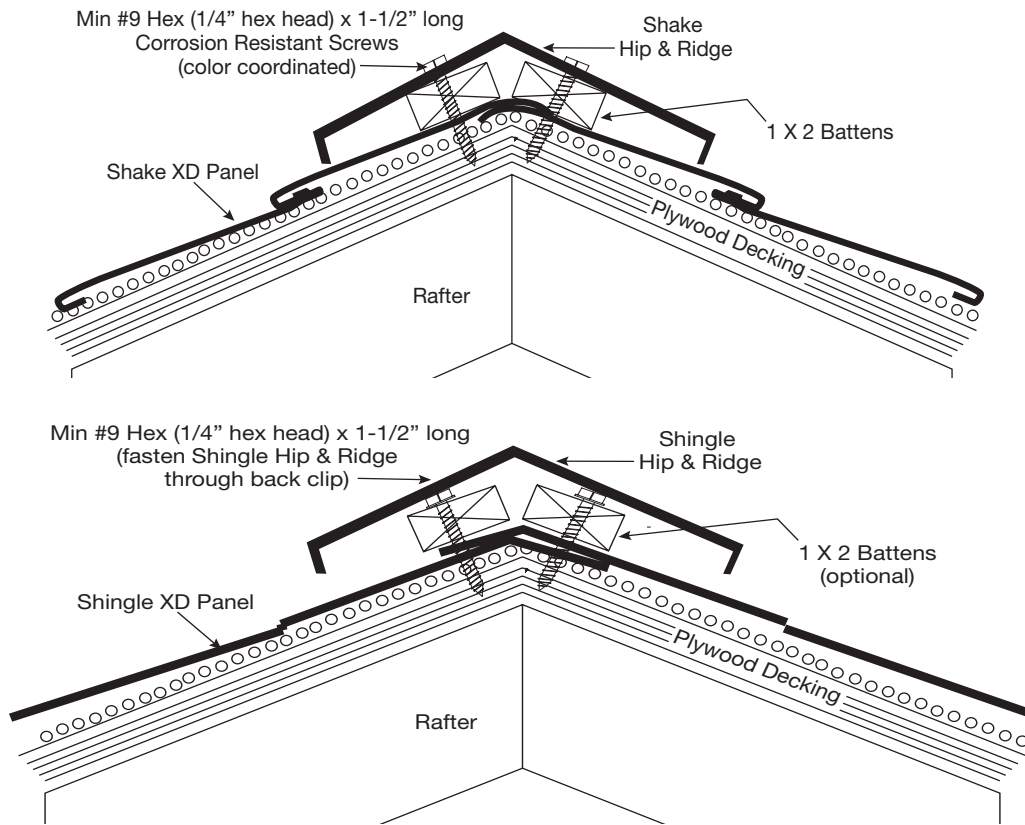


Cut the right side panel to fit into valley, hip or rake.



Install the right side panel to butt up to the left panel clip.

Panels at Closed Ridge: Install XD panels up to the top of the ridge, cutting off excess panel that extends higher than the ridge. Use fasteners to attach panels 1” below the ridge line. On the other side of the ridge, run the top panel 2” past the top of the ridge line. Attach panel with fasteners 1” below the ridge line. Use a heavy hammer or mallet to fold and overlap the extra 2” down over the top of the ridge onto the opposite panel.



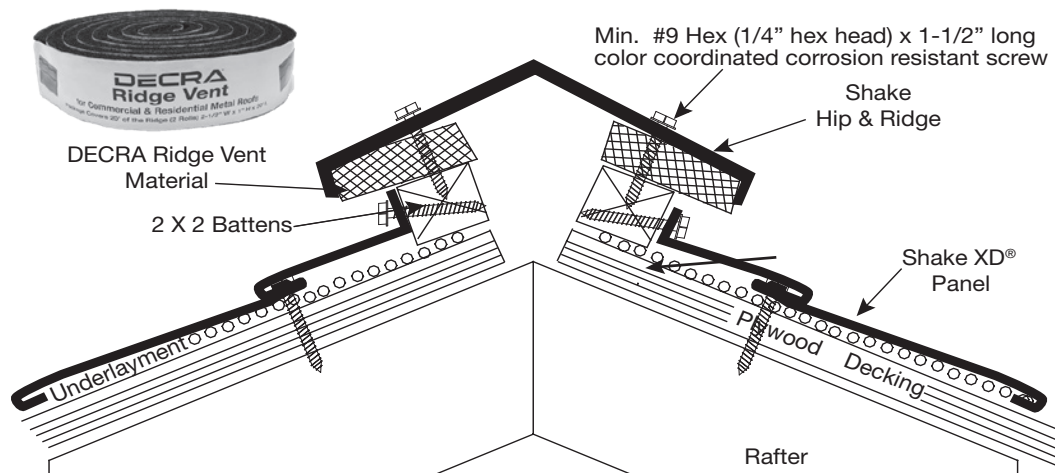
Venting

Panel Vents: If DECRA Panel Vents will be used, calculate the number of Panel Vents and select the proper location for each Panel Vent. Install DECRA panels up to Panel Vent location. Install the XD panel vent per the DECRA Roof Panel Vent Installation Guide found inside the panel vent carton, or available at DECRA.com.

DECRA panel vents should be installed on the last full course below the ridge, and no more than 4 feet down from the peak of the roof facet. Panel vents should NOT be used for air intake.

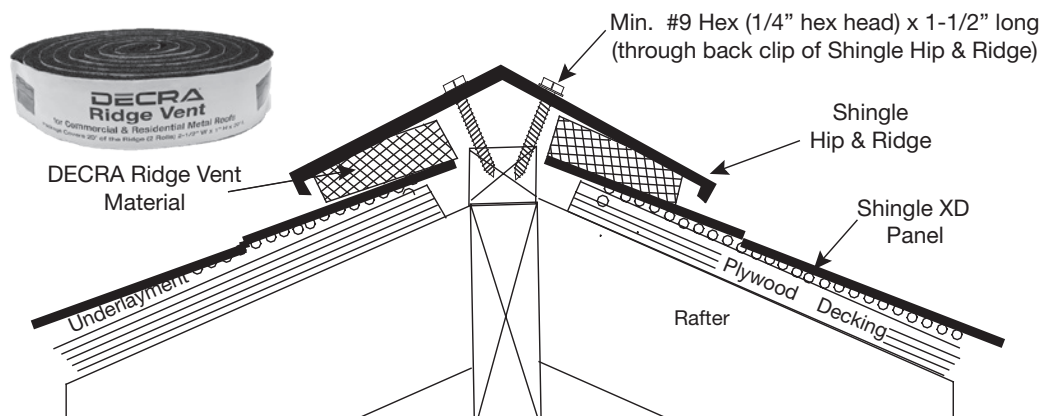
Ridge Venting - Shake XD: Install Shake XD panels up the last full course before the ridge to the edge of the opening that has been cut for the ridge vent. Install 2 x 2 wood battens along the ridge. Ridge vent can also be installed with stacked 2 x 2's on the center ridge beam. Please see our website for alternative installation details. Align the top edge of the 2 x 2 along the edge of the plywood on both sides of the ridge to expose the attic opening. Measure, cut, bend, and install the final course of panels. Roll out the vent material along the tops of the battens. Remove the white paper while unrolling to expose the adhesive dots. Apply pressure over the adhesive dots to hold the material in place during installation (see diagram below).

Install Shake Hip & Ridge pieces over the vent material. Fasten the screws through the vent material into the battens. *See Hip & Ridge Install at Hips & Ridges for Shake Hip & Ridge Installation.*



Ridge Venting - Shingle XD: Install Shingle XD panels up to the last full course before ridge. Install (optional) a 2 x 2 on top of the ridge beam. Note, the 2 x 2 will provide a firm fastening location for the ridge cap and ensure adequate opening for the ridge vent. Install panels up the ridge opening. Measure, cut, install, and fasten the panels so that a 3/4 inch opening is maintained between the top course of panels and the edge of ridge beam / 2 x 2. Roll out the vent material along the tops of the last panel course and ridge opening. Position the ridge vent material just inside the Hip & Ridge caps. Remove the white paper while unrolling to expose the adhesive dots. Apply pressure over the adhesive dots to hold the material in place during installation. (see diagram below).

Install Shingle Hip & Ridge pieces over the vent material. Fasten the screws through the vent material into the batten or plywood decking. *See Hip & Ridge Install at Hips & Ridges for Shingle Hip & Ridge Installation).*



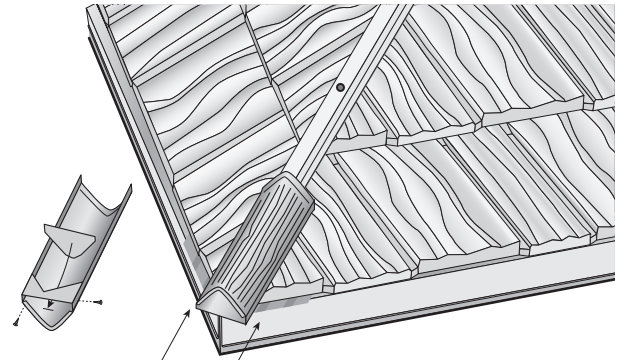
Hip & Ridge Installation at Hips & Ridges - Shake XD

Hip: The Shake Hip & Ridge piece should be attached directly into the 2 x 2 battens at the hips. Hip & Ridge pieces are overlapped and fastened through the sloped side using color coordinated minimum #9 Hex (1/4" hex head) x 1-1/2" long corrosion resistant screws.

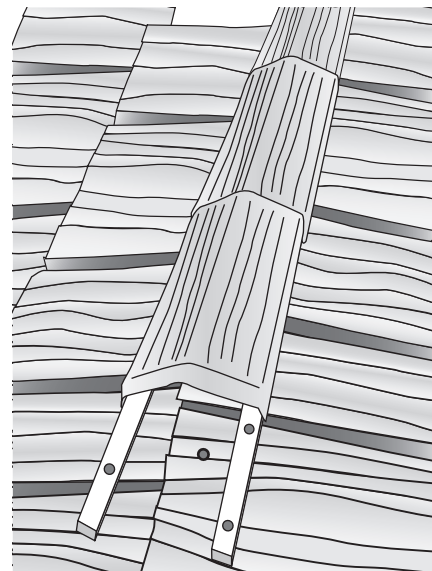
Ensure that the fastener is long enough to penetrate into the 2 x 2. Finish the end of the hip or ridge with a Shake End Cap.

Ridge: At the ridge install a 1 x 2 wood batten directly over the Shake XD Panels on both sides of the ridge using fasteners sufficient to penetrate the roof deck. Apply roofing grade sealant/adhesive in-between the wood battens and the Shake XD panels. Note, do not use copper based pressure treated wood with any DECRA roofing system. However, composite deck board can be used as alternative for the wood batten once cut down to the needed size.

The Shake Hip & Ridge pieces are overlapped and fastened through the sloped side of the cap into the 1 x 2 as described above.

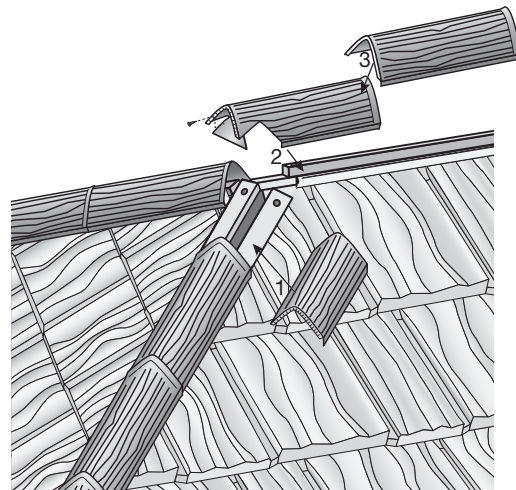


Fasteners on Both Sides of Hip & Ridge



Install Shake Hip & Ridge up the hips to where it meets the ridge.
Trim and notch the first piece of Shake Hip & Ridge where it meets on top of the hips.
Finish with Shake End Cap and Touch-Up Kit.

Running Hips into a Ridge: Add the top pieces of Shake Hip & Ridge at the hip and the first piece at the ridge. Trim the last pieces of Hip & Ridge where they meet the ridge. Add a piece of Hip & Ridge at the ridge and cut it to fit with Hip & Ridge on the hips. Finish with Touch-Up Kit as needed. Continue on with the ridge installation. Finish the end of the hip or ridge with a Shake End Cap. Use minimum #9 Hex (1/4" hex head) x 1-1/2" long color coordinated screws.

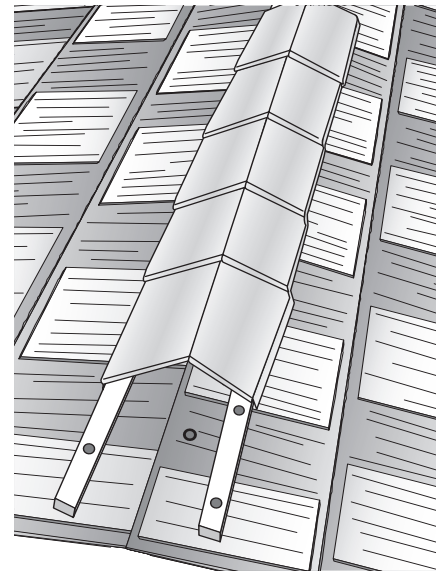
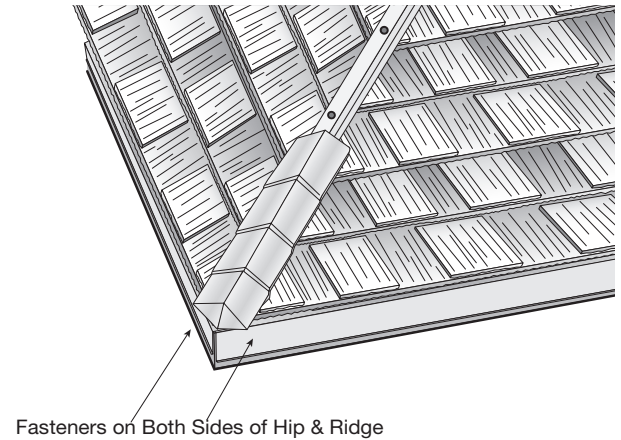


Hip & Ridge Installation at Hips & Ridges - Shingle XD

Hip: The Shingle Hip & Ridge piece should be attached directly into the 2 x 2 battens. Hip/Ridge pieces are overlapped and fastened through the back clip using minimum #9 Hex (1/4" hex head) x 1-1/2" long corrosion resistant screws. Ensure that the fastener is long enough to penetrate into the 2 x 2. The fasteners will be hidden by the next Shingle Hip & Ridge piece. No end cap is needed with the Shingle Hip & Ridge.

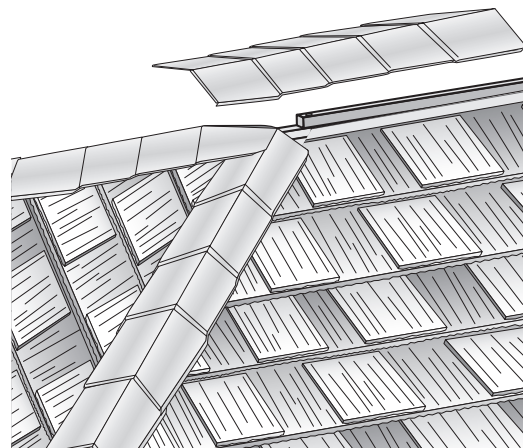
Ridge: Install a 1 x 2 wood batten (optional) directly over the Shingle XD Panels on both sides of the ridge using fasteners sufficient to penetrate the roof deck. Apply roofing grade sealant/adhesive in-between the wood battens and the Shingle XD panels. Note, do not use copper based pressure treated wood with any DECRA roofing system. However, composite deck board can be used as alternative for the wood batten once cut down to the needed size.

The Shingle Hip & Ridge pieces are overlapped and fastened through the back clip using minimum #9 Hex (1/4" hex head) x 1-1/2" long corrosion resistant screws. Fasteners should penetrate thru the decking or optional 1x2 wood batten.



Install Shingle Hip & Ridge up the hips to where it meets the ridge.
Trim and notch the first piece of Shingle Hip & Ridge where it meets on top of the hips.
Finish with Touch-Up Kit.

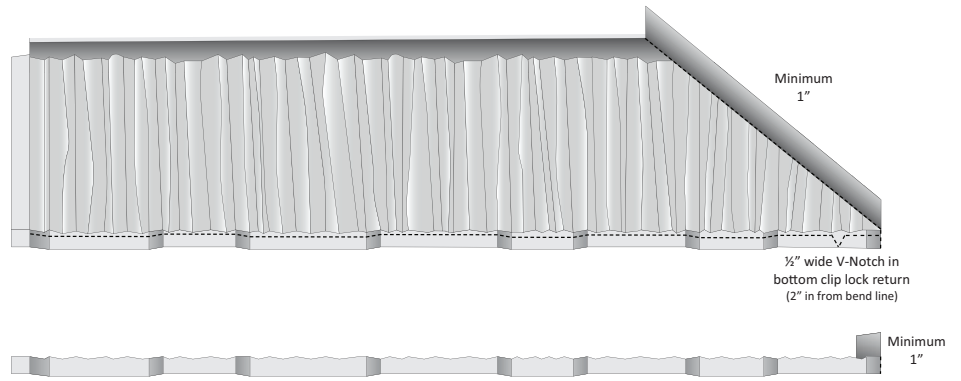
Running Hips into a Ridge: Add the top pieces of Shingle Hip & Ridge at the hip and the first piece at the ridge. Trim the last pieces of Hip & Ridge where they meet the ridge. Add a piece of Hip & Ridge at the ridge and cut it to fit with Hip & Ridge on the hips. Finish with Touch-Up Kit as needed. Continue on with the ridge installation. No end cap is needed with the Shingle Hip & Ridge.



Alternative Installation Method: XD Panel Bend-Ups

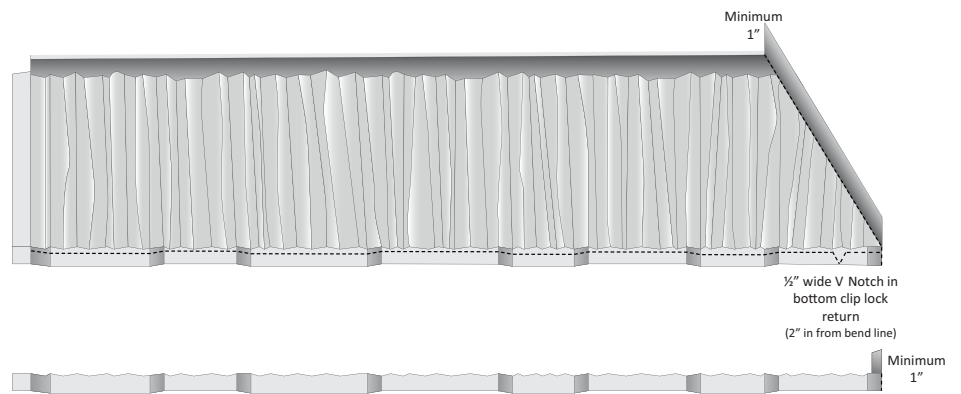
Bend-Up at Hips:

Mark the XD panel to length and add minimum 1" for bend-up. Remove Top and Bottom Clip Locks (including nose) to the bend line. Next, measure in from the bend line 2" and snip away a 1/2" wide V-Notch in Bottom Clip Lock return. Bend panel up minimum 1" and install the panel with bend-up against the 2x2. Proceed with the next row.



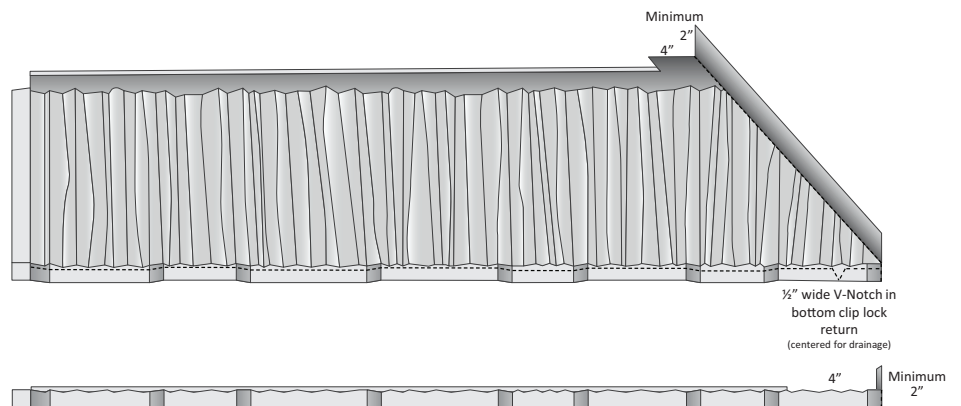
Bend-Up at Rake/Gable:

Mark the XD panel to length and add minimum 1" for bend-up. Remove Top and Bottom Clip Locks (including nose) to the bend line. Next, measure in from the bend line 2" and snip away a 1/2" wide V-Notch in Bottom Clip Lock return. Bend panel up minimum 1" and install the panel with bend-up against the 2x2. Proceed with the next row.



Bend-Up at Sidewalls:

Mark the XD panel to length and add a minimum of 2" for bend-up. Snip the Top Clip Lock 4" in from bend line, fold up and flatten down. **DO NOT** remove the Top Clip Lock. Snip and remove the Bottom Clip Lock (including nose) at the bend line. Next, measure in from the bend line 2" and snip away a 1/2" wide V-Notch in Bottom Clip Lock return. Bend panel up at the bend line. Flatten out bend-up and install the panel tight to the wall. Proceed with the next row.



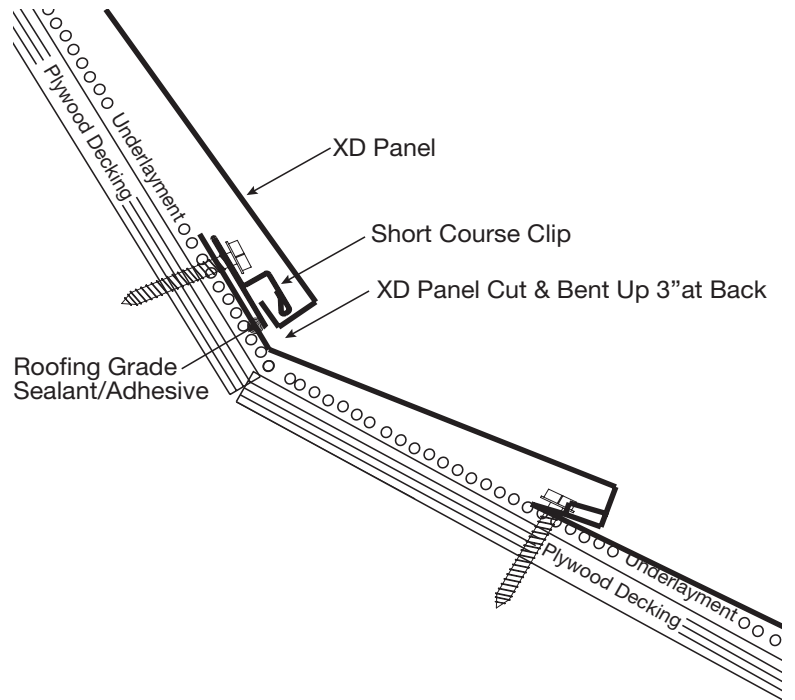
Pitch Change

Pitch Change - Low to High:

In instances where the roof pitches changes from low to high, run the XD Rake/Gable Channel up to the pitch change, cut bend and notch the channel to extend past the change in pitch approximately 3". Overlap the next piece of Rake/Gable Channel over the Rake/Gable Channel below the pitch change.

Install XD panels up to the area where the change occurs. Cut the back of the XD panel to extend 3" past the change in pitch. Bend the panel forward at the pitch change to conform to the deck. In lieu of bending panel at transition, an apron or transition metal may be installed from the upper slope down over the lower slope. The apron or transition metal should be bent to fit tight and provide adequate coverage over the lower slope.

Install the next panel using the Short Course Clip as a starter.

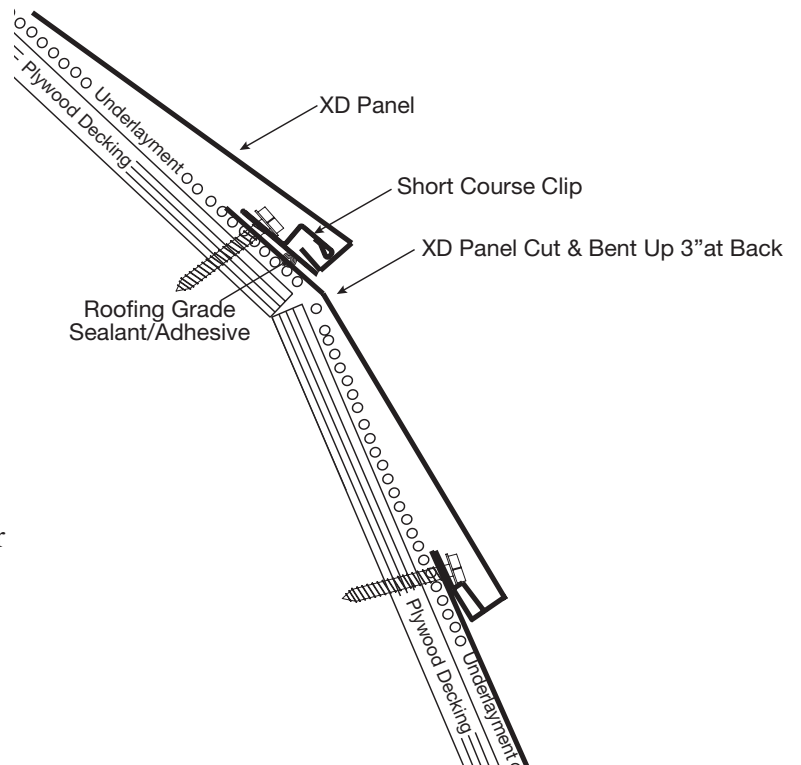


Pitch Change - High to Low:

In instances where the roof pitches changes from high to low, run the XD Rake/Gable Channel up to the pitch change, cut bend and notch the channel to extend past the change in pitch approximately 3". Overlap the next piece of Rake/Gable Channel over the Rake/Gable Channel below the pitch change.

Apply a roofing grade sealant/adhesive along the panel above the bend and below the cut edge. Install a Short Course Clip on top of the sealant above the change in pitch (see diagram to the right). If an apron or transition metal is used, apply a roofing grade sealant/adhesive along the upper slope over the apron or transition metal. Install a Short Course Clip on top of the sealant above the change in pitch.

Install the next panel using the Short Course Clip as a starter.

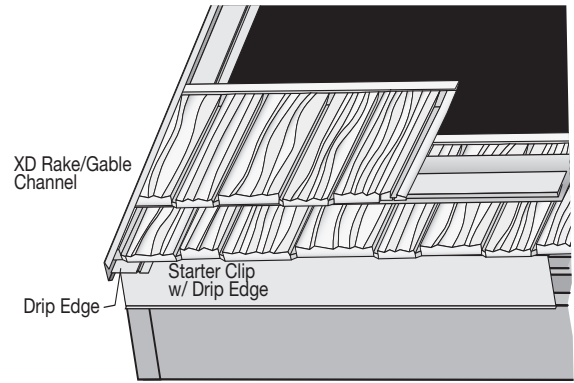


Short Course

In some instances, a short course will be necessary. A short course is needed when a section of the fascia steps out and is not an even panel width difference from the main fascia.

A short course is inserted by fastening the Short Course Clip over the panel in the course below at the point where the next full panel above will align with the panels to the right and left in the course above. Once the Short Course Clip is secured into the panel below, clip the next course of full panels into it.

Alternative Short Course detail: Align for full panels to be used along longest run of eave. Adjust for shorter run by cutting off bottom portion of panel and creating a bottom lock in the field. This is done by measuring up or down in panel exposure increments (Shake XD 12 3/8" and Shingle XD 12 1/4") and chalking lines. To measure for short course panel(s), measure from chalk line to edge of starter clip at the short eave then add 3/4-1" to be used for short panel bottom lock. Using hand seamer's crimp modified bottom lock to the starter.



Roof Jacks/Steep Pitch Roof

To use roof jacks, remove a portion of the top Clip Lock of panel to allow roof jack to lay flat on the deck and on top of the panel. Place padding between jack and panel to avoid scuffing. Install the next course of panels by notching out the bottom Clip-Lock of the panel at the jack location and folding it up (do not completely remove the piece). When removing the roof jack, fold the nose of the panel back into place and finish using a roofing grade sealant/adhesive and a Touch-Up Kit.

High Wind

In areas prone to high winds, installation must meet local codes. Reference International Code Council (ICC) **ESR-1754** for DECRA direct to roof deck roof system installations, section 4.4 Wind Resistance and Table 1 detail on wind uplift pressures and panel fastening procedures. **ESR-1754** code compliance document is available on **DECRA.com**.

Freeze Thaw

Ice and water shield is recommended in all areas susceptible to freeze/thaw conditions.

Foot Traffic

Avoid walking on side laps. See walking instructions at **DECRA.com**.

Sealants

A roofing grade sealant/adhesive should be used with this roofing system. Where possible, the sealant should be covered by the roofing system or with matching stone granules. Sealant should not be used to refinish damaged panel surfaces. Touch-Up Kits are available in colors matching the various stone coated panel finishes.

Cleaning & Touch-Up (During Installation)

After installation is complete, be sure to clean all debris off of the roof, especially any metal shavings.

In cases where it is necessary to touch up a panel during the installation process or finish a roofing penetration or other detail, DECRA Touch-Up Kits are available in all of the colors matching the stone coated panel finishes. For answers to questions or more details not covered in this guide, call **(877) 463-3272** or visit **DECRA.com**. Architectural Details and Product Specs are available at **DECRA.com**.



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