



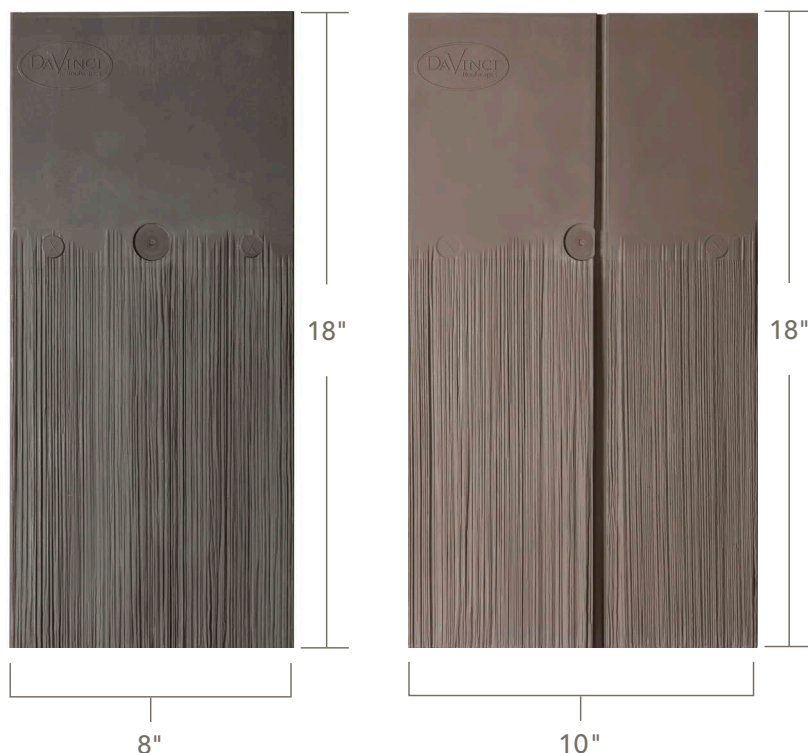
DaVinci Siding

Hand-Split Shake Siding

INSTALLATION GUIDE

DaVinci polymer shakes are carefully engineered to provide the authentic look of hand-split shakes with dramatically increased durability and resistance to fire and impact.

These Installation Instructions describe and illustrate the steps required to properly install DaVinci Hand-Split Shake siding on most residential and light commercial structures and provide detailed information that will promote a successful installation. Deviation from the requirements contained in this document may affect the product's appearance or long-term performance and may also affect coverage under the product warranty.



Select Shake		
Widths: 10", 8"	Length: 18"	Thickness at butt: 5/8"
Exposure/Face Reveal: 6", 7", 8"		

This information is provided for the use of professional contractors. This Installation Guide does not supersede local building codes which should always be followed. DaVinci Roofscapes® does not warranty or have any responsibility for installation of its products. The DaVinci Roofscapes Lifetime Limited Material Warranty outlines its warranty responsibilities for the roofing and siding materials it manufactures.

For questions about DaVinci Siding or its application, contact DaVinci Roofscapes®, LLC
913-599-0766 or 800-DaVinci (800-328-4624) or www.davinciroofscapes.com

Please be sure to check DaVinci's website for updates. Installation Guide is subject to change without notice.

INSTALLATION

Section 1: General Construction Requirements

DaVinci Hand-Split Shake siding must be installed on flat, vertical wall applications only. DaVinci Roofscapes offers multiple roofing products for applications on sloped, tilted, or Mansard type roofs.

DaVinci Hand-Split Shake siding can be installed on braced wood or steel stud constructed walls. Any misaligned framing or irregularities must be corrected as they may mirror through to the finished application.

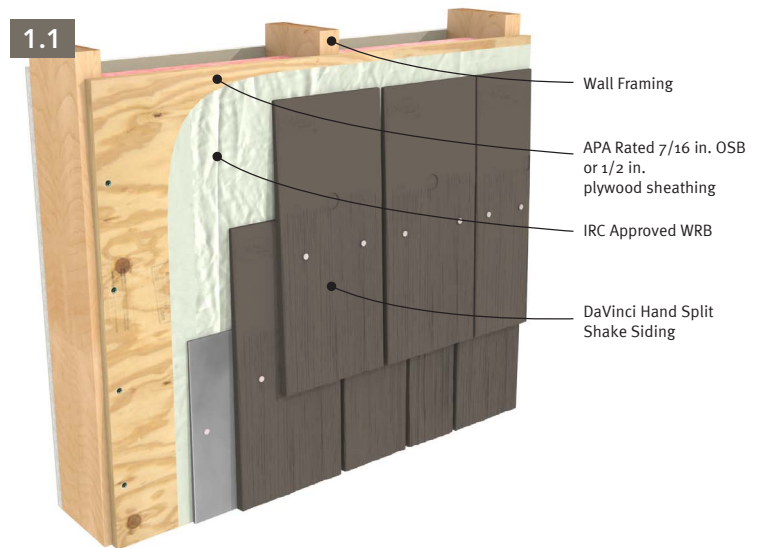
An APA rated, minimum thickness 7/16" OSB or 1/2" plywood sheathing is required. DaVinci Hand-Split Shake Siding may not be installed over non-structural sheathings such as foam, fiber builder board, or gypsum type panels. (Fig. 1.1)

DaVinci shake siding may be installed on Structural Insulated Panels (SIPS) providing the panels incorporate the minimum thickness sheathing requirement of 7/16" OSB and the SIP system is capable of supporting the load imposed by the shake siding. Please contact the SIPS manufacturer regarding the application of exterior cladding requirements.

DaVinci shake products must be installed with courses oriented horizontally and may not be installed in an angled, sloped, or otherwise non-horizontal fashion.

A weather resistive barrier is required in accordance with local building codes. Use an approved weather resistive barrier as defined by the 2015 IRC. The weather resistive barrier must be installed in accordance with the manufacturer's specifications and requirements. DaVinci Roofscapes, LLC assumes no responsibility for water infiltration.

Please contact DaVinci Roofscapes Technical Support regarding wind load information and installations above 45 feet.



Section 3: Storage and Handling

Due to our unique polymer construction, DaVinci Hand Split Shake Siding products are more robust and damage resistant than most other siding products. However, care must be taken to avoid storage, delivery, and on-site damage.

DaVinci recommends that shakes be kept dry and stored in a covered area or covered with a tarp.

Shakes must be stored flat and off the ground prior to installation

The 22-piece bundles are easily carried and moved. Do not roll, toss, or otherwise mishandle products as edge scuffing or damage may occur.

Section 2: Product Inspection

DaVinci Hand-Split Shake Siding is packaged in 22-piece bundles. Each bundle will contain a mix of 8", 10" and double 10" shakes.

All shakes should be visually inspected prior to installation. Do not install any product which may have been damaged in shipment.

Please contact DaVinci Customer Service toll-free at 1-800-328-4624 prior to application should you have any questions or product concerns.

Section 4: Clearances

Please refer to local codes regarding clearance above finished grade. DaVinci requires a minimum clearance of 6" above finished grade. (Fig. 4.1)

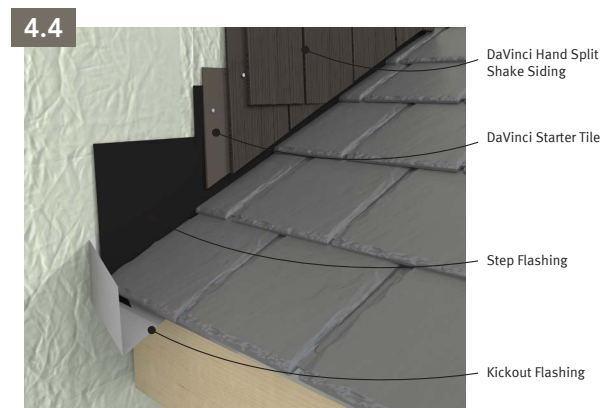
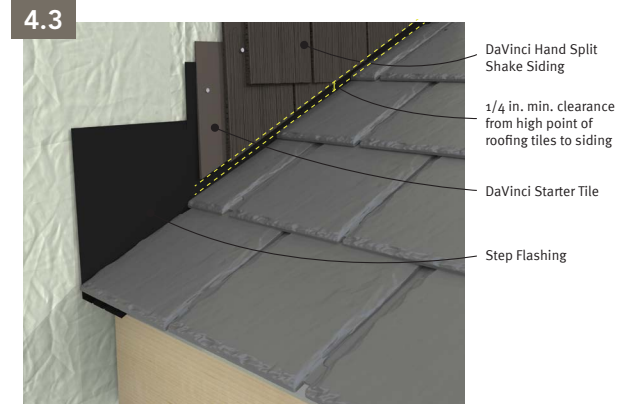
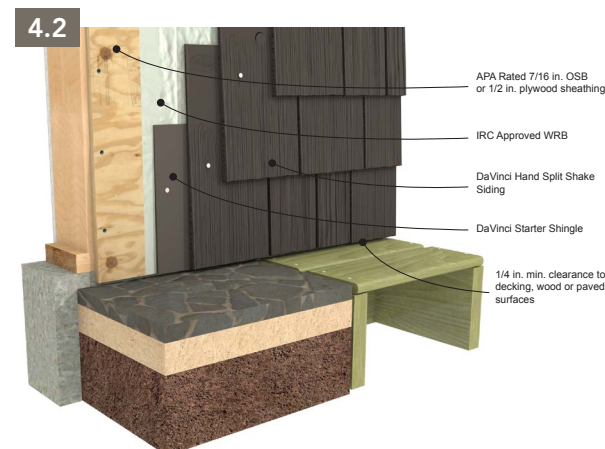
A minimum 1/4" clearance must be present between shakes and decking, wood or concrete/masonry walks, steps, stoops, or porches. (Fig. 4.2)

At roof-to-wall intersects, or any other cladded area above a roofline, a minimum 1/4" clearance above the roofing material must exist. Flashing and counter flashing must be present in accordance with the roofing manufacturer's requirements and local code. (Fig. 4.3)

A pre-engineered or site-fabricated "kick-out" flashing must be present at roof-to- wall intersects to direct roof water away from the wall. (Fig. 4.4)

Do not install gutter ends against or in contact with shakes.

A minimum clearance of 1/16" to 1/8" must exist above all horizontal flashings. (Fig. 4.5)



Section 5: Blocked Penetrations

DaVinci requires that all wall penetrations of 1-½" or larger incorporate a "blocked" or "trimmed split-block" design. (Fig. 5.1)

Trim must be of sufficient thickness. Shake ends must not extend beyond the face of the trim.

The top, horizontal portion of the block must be flashed to deter water entry behind the siding.

Maintain a 1/16" to 1/8" gap above the horizontal flashing. Do not caulk the gap.

In some cases, it may be necessary to "split" the trim attachment around the opening for easier installation. A weather-cut should be used at this cut.

SECTION 6: SAFETY

DaVinci Hand Split Shakes are manufactured from our proprietary blend of polymers which offer dust-free on-site fabrication. DaVinci shakes can be safely and efficiently drilled or cut with common tools and without the need for specialty tooling or equipment. However, standard safety practices must always be observed when drilling or cutting the product.

- Use best work practices to minimize any safety risk.
- Always wear protective safety glasses when using high-speed cutting tools.
- Always wear protective safety glasses when using pneumatic nailers.
- Wear cut-resistant gloves when cutting and nailing.
- Observe all applicable OSHA guidelines and local laws regarding the usage of Personal Protective Equipment (PPE). Additional information can be found at www.osha.gov/SLTC/personalprotectiveequipment

SECTION 7: CUTTING

Various common construction tools and methods may be used to successfully cut DaVinci shakes. No specialized tooling or equipment is required.

Hand held circular saws with blade diameters ranging from 4" to 7-¼" may be used. For best quality of cut, we recommend a minimum 24 to 32 tooth, carbide blade.

When using hand held saws, ensure the saw table's bottom surface is smooth and without nicks or heavy scratches, and grit-free to avoid damage or marking of the product face.

Miter saws and extended reach, compound-slide miter saws with 10" or 12" blades may also be used and offer the installer a more precision cut and increased efficiency. Use a carbide blade with 32 to 60 teeth.

For radius or irregular shaped cuts, a jigsaw may be used with a standard wood cutting blade.

5.1



Always cut shakes face up.

Shakes may also be cut with a sharp razor/utility knife. Use a straight edge to guide the blade at the desired location. More than one pass may be required to adequately score the material. A small amount of additional trimming of the structural ribbing on the back side of the shake may be necessary.

Holes may be drilled using standard twist drills or hole saws.

SECTION 8: FASTENING

DaVinci Hand Split Shake siding must be installed with a full round head, roofing nail with a minimum length of 1- $\frac{3}{4}$ ".

Fasteners must be corrosion resistant; hot dipped galvanized, electro-galvanized, and stainless-steel fasteners are acceptable. Please check with local code requirements in coastal areas.

DaVinci shake siding products may be installed using hand-driven nails, or fastened with a pneumatic tool. Pneumatic fastening is recommended.

When pneumatic tools are used, it is important to control the fastener depth of drive. Ensure the pressure from air compressors is regulated and does not exceed the pneumatic nailer's manufacturer's requirements. Additionally, ensure the tool has an adjustable depth of drive or flush mount attachment to control the nail seating depth.

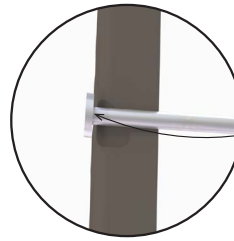
Do not over drive or under drive fasteners. The nail head should be snug against the face of the shake. Over driven fasteners may slightly cup or bow the shake and result in the lower edge of the shake not being tight against the underlying course. (Fig. 8.1)

Framing nailers are not approved as product damage may result.

Do not use siding nails, aluminum fasteners, staples, clipped head or T-head nails.

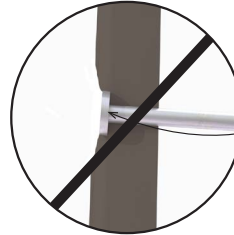
As an alternative, a corrosion resistant, #8, wood thread, minimum .375" head diameter, minimum 1- $\frac{5}{8}$ " length, bugle head screw may be used.

8.1



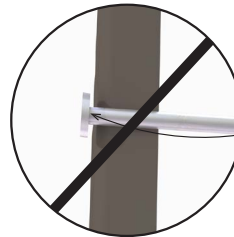
Correctly Driven Nails

Nail head snugly against face of the shake



Over-Driven Nails

Nail head over-driven



Under-Driven Nails

Nail head under-driven

SECTION 9: HAND-SPLIT SHAKE INSTALLATION

GENERAL

The bottom edge of the shakes should be aligned with the corner trim.

The bottom edge of the first course must exhibit a minimum 6" clearance above finished grade; and a 1/4" clearance above hardscape, decks, or patios.

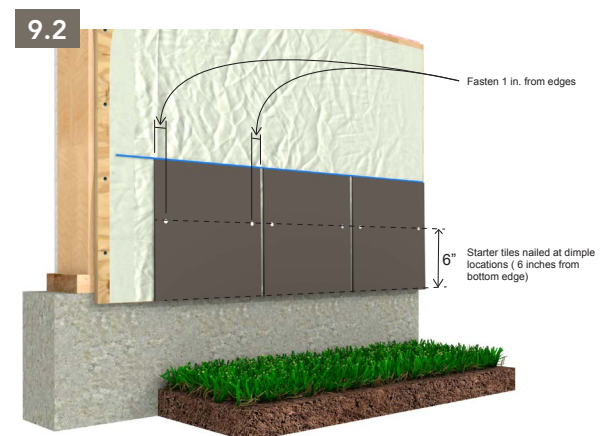
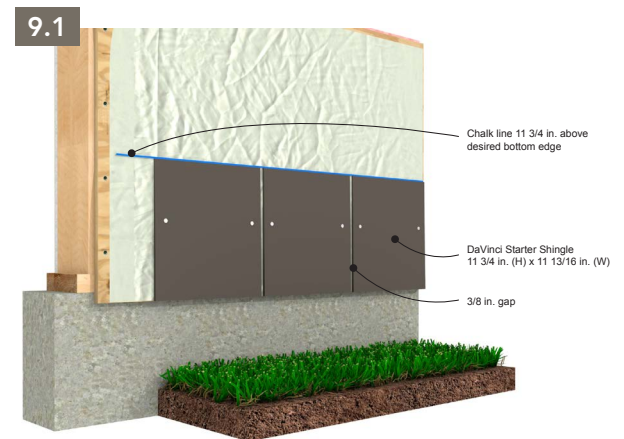
STARTER TILE COURSE INSTALLATION

Individual shake siding applications require the application of a starter course. DaVinci manufactures a specific starter tile for this purpose. The starter tile is required to provide solid backing on the initial course and also sets the first course on the proper angle. (Fig. 9.1)

The starter tile is 11-3/4" in height and 11-13/16" in width. To begin, snap a chalk line 11-3/4" above the desired bottom edge location. The bottom edge may be placed level with the bottom of the wall sheathing or mudsill. Alternatively, the bottom edge of the starter tile may overlap the foundation or other material up to 1" below the sheathing or mudsill.

Each starter tile has a molded in nail placement locators. Secure each starter tile with two approved fasteners at these locations. (Fig. 9.2)

Continue to install the starter tiles by aligning the top edges of the tiles to the chalk line. The starter tiles should be installed with the DaVinci logo on top. Leave a 3/8" gap between each tile.



LAYOUT AND STAGING

In any individual shingle/shake cladding application, proper staging and layout is a key part of a successful installation. DaVinci provides shake widths of 8", 10", and Split 10" pieces which incorporate the look of a 4" and a 6" shake. Split 10" shakes are included that simulate a 6" piece, then a 4", and also the reverse. This product mix aids the installer in selecting the proper width combinations for the given course. (Fig. 9.3)

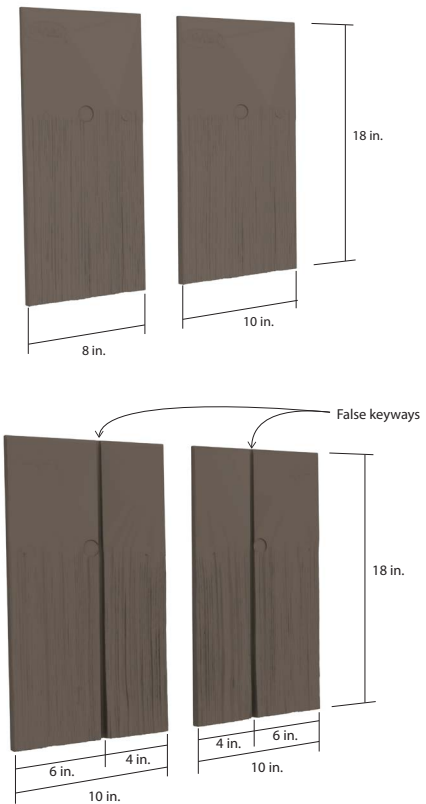
In addition to the 4 styles of shake available in each bundle, it is permissible to cut or "split" a Split 10" shake resulting in the installer having a 5-3/8" width piece and a 4-5/16" width piece. This option provides the installer with additional shake width options.

As is common practice in an individual shingle installation, the installer must take time to layout the courses as they proceed up the wall to avoid creating patterns and stacked keyways. DaVinci recommends the installer open 2-3 bundles at a time to locate and note the size and quantity of shakes available and proceed accordingly.

Space shakes no closer than 1/4" and no greater than 3/8". The ability to adjust the keyway spacing by 1/8" can affect the width dimension of the course ending piece and offers the installer greater flexibility.

Course to course keyways must be spaced a minimum of 1-1/2" apart.

9.3



SHAKE FIRST COURSE INSTALLATION

Use a level and chalk line to establish a level and straight reference point for the first course. DaVinci recommends the installer continue to check for level lines throughout the installation.

DaVinci shakes are 18-1/8" in height. To begin the first course, measure and mark a chalk line 18-1/8" up from the bottom edge of the starter tile course. (Fig. 9.4)

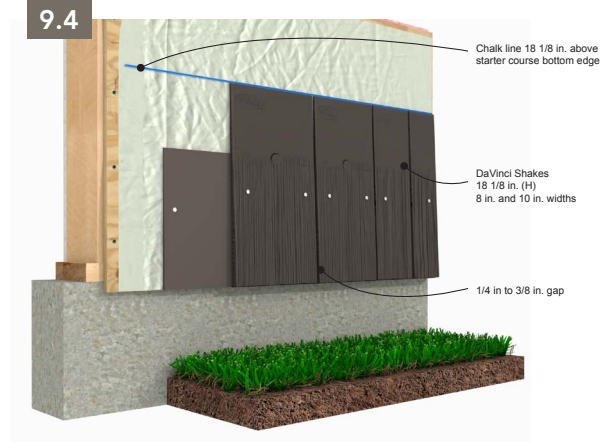
The bottom edge of the shakes should not extend below the starter course.

Install shakes by aligning the top edge of the shake with the chalk line.

Continue the first course by installing shakes in a random manner mixing the available 8", 10" and Split 10" shakes.

Maintain a 1/4" to 3/8" gap between shakes.

9.4



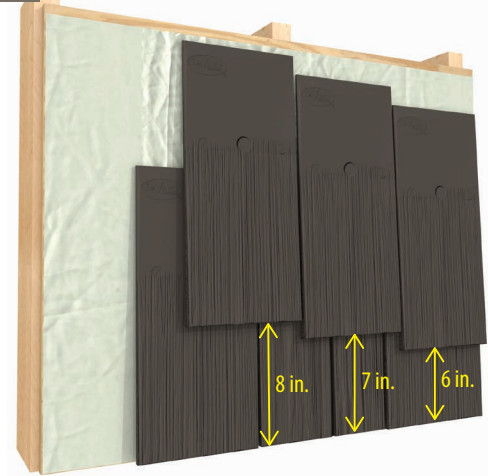
REVEAL/OVERLAP

DaVinci Hand-Split Shake siding may be installed with a face reveal of 6", 7" or 8". Reveals of less than 6" or greater than 8" are not permitted. (Fig. 9.5)

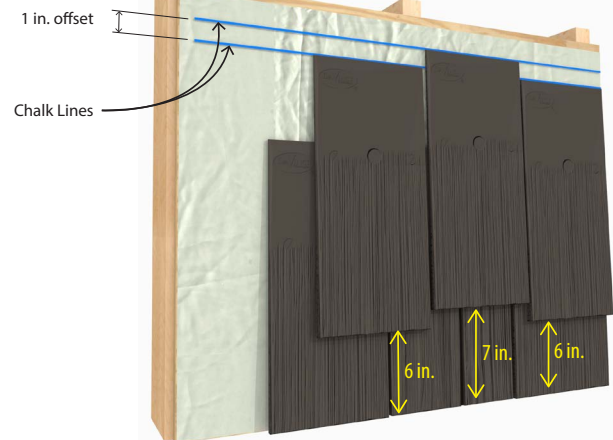
A "staggered" installation is acceptable and may be achieved by snapping chalk lines at 6" and 7"; or 7" and 8" intervals and dropping the top of the shake to the lower line on every other shake. (Fig. 9.6)

Applying chalk lines to the face of the product is not recommended.

9.5



9.6



INSTALLING SUBSEQUENT SHAKE COURSES

Determine the desired face reveal / exposure.

Example: 8" exposure: From the top edge of the first course, measure and mark the wall in 8" intervals up the full height of the wall. Repeat the process on the opposite side of the wall. Snap chalk lines. Begin the second course by placing the top edge of the shakes along the chalk line and securing with the appropriate fastener. (Fig. 9.7)

Space shingles $\frac{1}{4}$ " to $\frac{3}{8}$ " apart. A common practice is to fabricate a shim of the desired thickness and use as a spacer.

Mix the 8", 10", and Split 10" shakes in a random manner and avoid creating a repetitive pattern. Layout of the course may be needed to help avoid stacked keyways and noticeable patterns.

Shake keyways from one course to the next must not line up and be offset a minimum of $1\frac{1}{2}$ " to deter water entry.

Maintain course alignment around corners on adjacent walls.

Due to the overlapping of shakes a sealant is not required or recommended at shake- to-shake joints or course-to-course joints.

9.7



OPENINGS AND WINDOW / DOOR TREATMENTS

With any individual shingle/shake application, special care must be taken at door/window/vent type openings. All horizontal trim must be properly flashed, and all window manufacturer's requirements must be observed.

When abutting shakes to the window bottom and side trim attachments, the shakes may be installed with light contact, or a 1/16" gap.

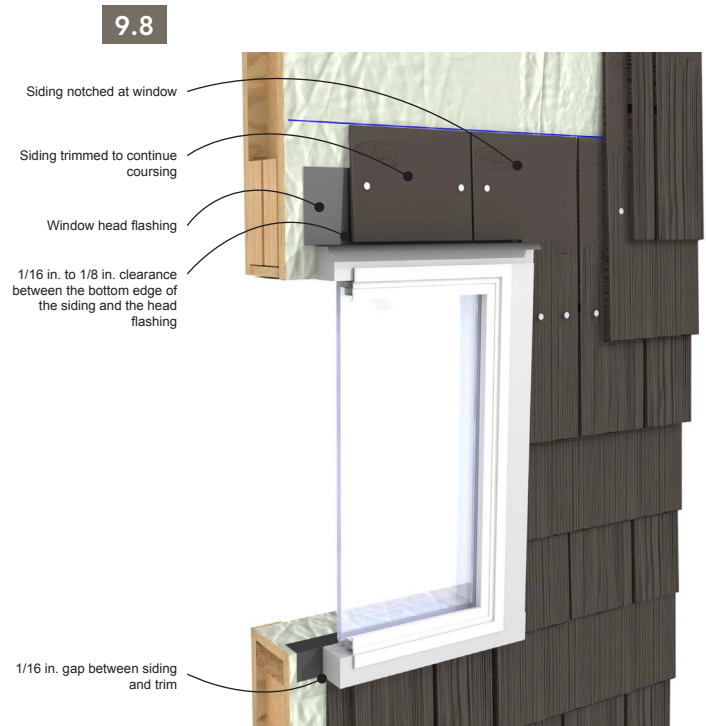
Depending on the window/door size and course layout/reveal chosen, in some cases smaller, less than full size pieces will be required. These may be fastened with corrosion resistant 15-gauge finish nails or trim screws.

At the top of the opening, the installer may use cut-to-size starter shingles or cut shakes at the appropriate height for the underlying "filler" course.

We recommend the "next to the top of the opening" or penultimate course extend the top portion of the shake beyond the corner of the opening. In other words, the shake should not be installed so that a gap exists at the opening corner. The shakes at the opening corner should be cut or notched. This method will help deter unwanted water entry at this juncture. (Fig. 9.8)

At the top course over openings, two methods may be used: 1) Continuing the existing course and cutting the bottom of the shake to fit. This method enables the installer to retain top edge alignment and therefore the same shake thickness across the opening. 2) An alternate method is to retain the solid bottom edge of the shake and cut the shake to the desired height by measuring from the bottom edge up and removing the top portion of the shake. Please note this method utilizes the thickest portion of the shake and may cause a slight thickness variation/alignment issue across the face of the shakes at this transition.

With either method, maintain a 1/16" to 1/8" clearance above the horizontal flashing.



SECTION 10: TRIM AND TERMINATIONS

TRIM ATTACHMENTS

All installations must incorporate the use of corner boards.

Do not install in a laced or mitered corner installation.

At vertical trim-to-siding junctures (inside and outside corners, door, window, and other trim attachments) shakes may be a) butted in light contact with trim; or b) leave a 1/8" gap and seal with a high-quality exterior sealant. (Fig 10.1)

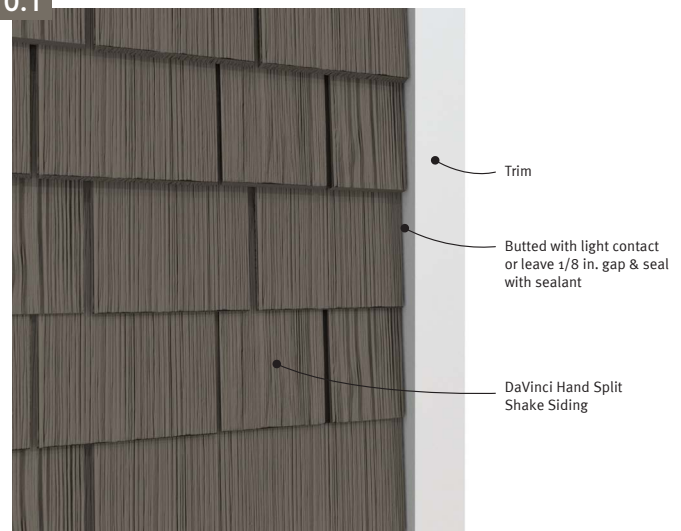
Approved sealants include high-quality, exterior grade, urethane, polyurethane, or silicone based sealants which meet or exceed ASTM C920 requirements.

The application of DaVinci shakes builds three layers of shakes that build a total thickness of 1-1/2". If using a 6" face exposure, these layers build a thickness of 1-5/8". As such, a trim thickness of 1-3/4" to 2" is recommended. All trim must be of sufficient thickness to cover or cap the course ends. (Fig. 10.2)

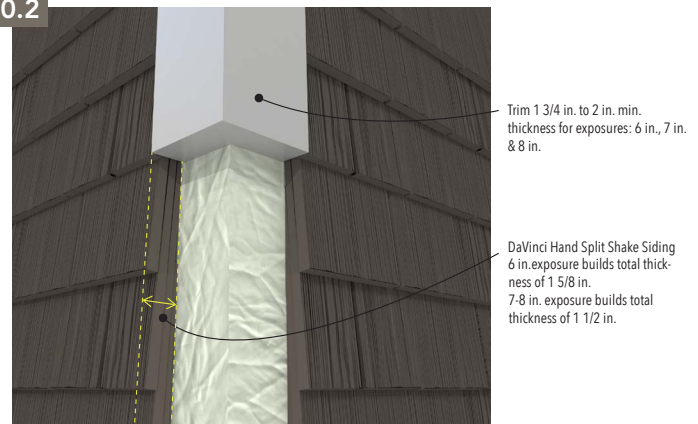
Multiple solid trim options are available. Wood trim products are available in 1-1/2" to 2" thicknesses, fiber-cement trim products are available in various designs and up to 1-1/4" thickness, and cellular PVC trim products are available in 1-1/2" thickness. In order to meet the required thickness, a continuous, solid shim build out or "pack out" behind the trim may be necessary.

Flashing must be present at all horizontal trim with a 1/16" to 1/8" gap present between the shake bottom edge and flashing. Do not caulk this gap. Do not use raw aluminum flashings. Flashings must be galvanized, anodized or PVC coated.

10.1



10.2



TERMINATIONS

When the product is butted to an inside or outside corner trim, or window/door surround (depending on the wall dimensions and layout of openings) it will be common to have the need for a specific sized piece.

All cut edges should butt to the corner or trim attachment with the factory edge to the field joint side.

At top course terminations, depending on layout, wall height, and reveal/exposure, a partial, less than full height course may be necessary. These pieces may be secured with 15-gauge, corrosion resistant, finish nails through the face of the shake. If a trim attachment such as a frieze board or dental molding is to be used which will cover the top portion of the top course, roofing nails or appropriate screws may be used. Position all fasteners a minimum of 1/2" from product edges. Corrosion resistant trim screws may also be used. (Fig. 10.3)

On gable ends and wall to roof junctures, less than full size angle-cut pieces may be secured with a 15-gauge, corrosion resistant, finish nail through the face of the shake. Position all nails a minimum of 1/2" from the product edge. Corrosion resistant trim screws may also be used.

10.3



J CHANNEL

J channel type trim of sufficient receiver thickness may be used at multiple trim locations including corners and door and window surrounds. Deep pocket J channel products are available from various manufacturers.

Do not install shakes “tight” against inside of J channel.

Do not fill the J channel with caulk or sealants.



SECTION 11: FINISHING & MAINTENANCE

DaVinci Hand-Split Shake siding products are made from pure virgin resins fortified with state-of-the-art UV stabilizers and arrive at the job-site ready to use. No field applied finish or coatings are necessary. Our blended-in color process creates rich long-lasting color requiring minimal maintenance.

Do not apply any type of topcoat to DaVinci Shake products.

The occasional maintenance of any exterior cladding is considered normal. DaVinci recommends that normal routine maintenance should include:

- The removal of dirt and debris by washing down the exterior surfaces periodically with a low-pressure spray or garden hose. DO NOT use high pressure power washers as they may blast water between the course and behind the shakes.
- Keep gutters clear and unclogged to prevent overflows.
- Maintain a minimum ground clearance of 6" by preventing the build-up of decorative mulch, stone, etc.
- Keep vegetation, shrubs, and landscaping trimmed to avoid direct contact with the shakes.