

THE ULTIMATE GUIDE TO

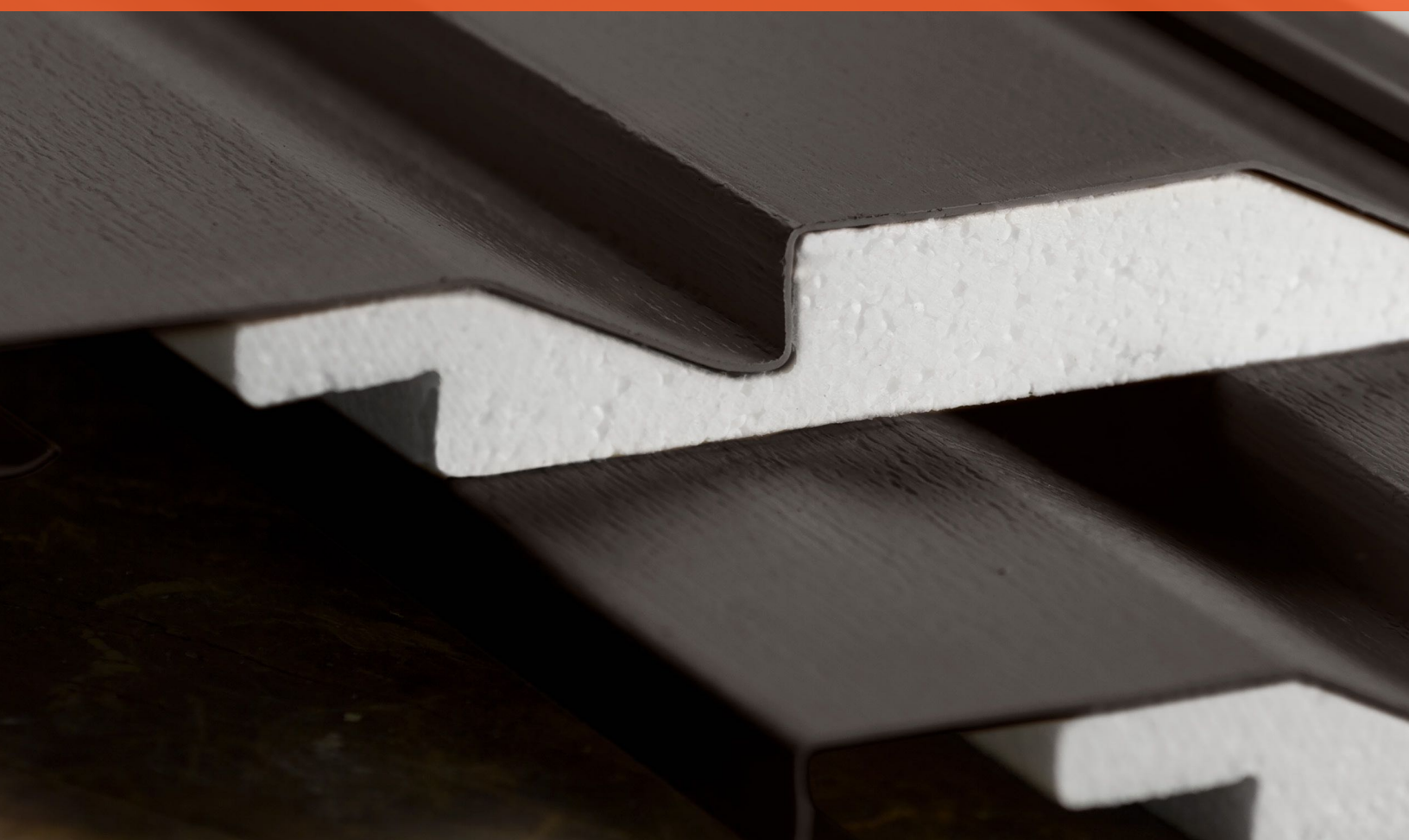
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# INSULATED VINYL SIDING

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FROM WHAT IT IS TO INSTALLATION, AND EVERYTHING IN BETWEEN

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- A PUBLICATION FROM PROGRESSIVE FOAM -

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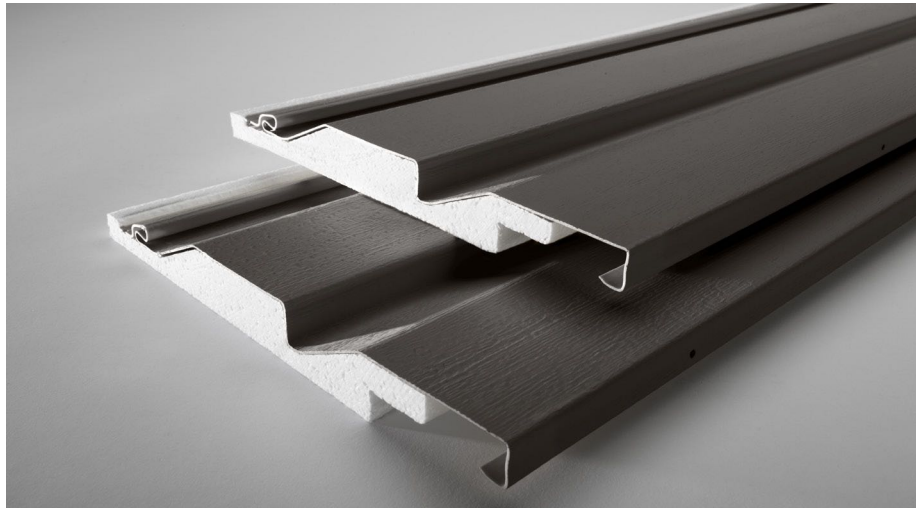
Top Brands

## CHAPTER ONE

# What is Insulated Vinyl Siding?

## What is Insulated Vinyl Siding Made Of?

Insulated siding is made of a contoured rigid foam backing permanently adhered to vinyl siding. Vinyl siding made up 39% of the siding market in 2013, making it the most popular siding in America, providing a low maintenance exterior and a wide assortment of design options, including hundreds of colors and various profiles like dutch lap, clapboard, board and batten, shake, and more.



### Vinyl Siding

A virtually maintenance-free home exterior product, available in thousands of configurations with varying profiles, shapes, and colors. Vinyl siding is the most popular siding choice on the market today, making up 39% of all siding sales in 2013.

### Foam Insulation

The insulation component of insulated siding is made of expanded polystyrene (EPS) rigid insulation, contoured to perfectly fit the profile of the vinyl siding. The insulation is permanently adhered to the vinyl siding panel during the manufacturing process. This helps improve the impact resistance of the siding, providing more stability over time while also insulating the home.

### High-Strength Adhesive

This product helps form a permanent bond between the vinyl siding and the foam. Extensive laboratory testing and real-life installations on over half a million houses during the past 20 years have proven the strength of this permanent bond.

## CHAPTER TWO

# What are the Benefits of Insulated Vinyl Siding?

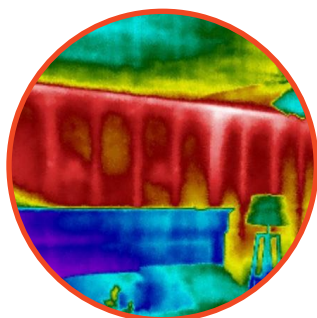
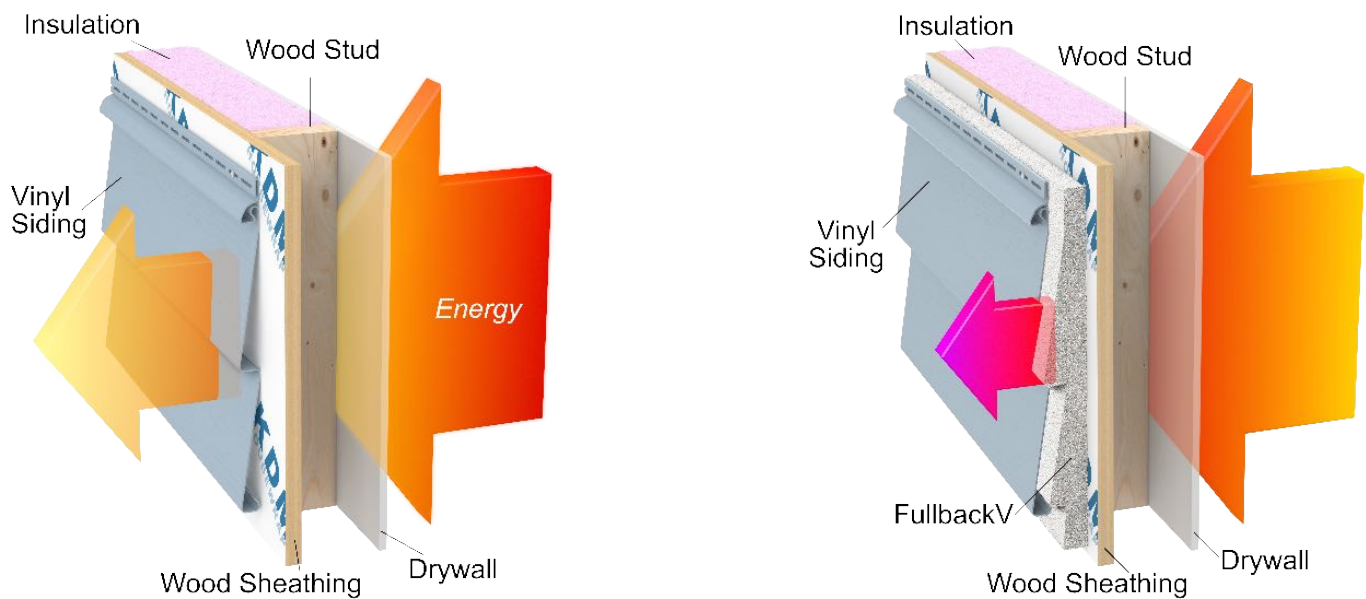
## Energy Savings

Insulated siding helps reduce heating and cooling costs by wrapping the home in a continuous blanket of insulation, keeping heat inside in the winter and outside in the summer.

Even if you have pink batt insulation between your studs, there may still be an energy leak in your walls. The culprits are the wood studs: heat bypasses the insulation in the wall cavity and transfers through the studs, allowing energy to leak through the walls. This process is called thermal bridging.

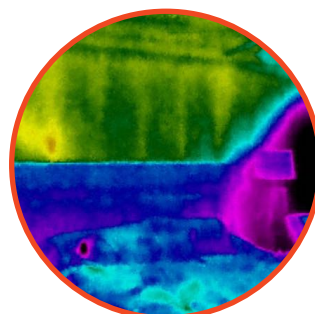
Nearly 25% of a home's wall is made of studs that typically aren't insulated, so it's like having one entire wall of the home without insulation.

To combat this problem, the U.S. Department of Energy (DOE) says "when new siding is to be installed, it is a good idea to consider adding insulation under new siding."



### Before (Summer)

Thermal imaging from inside a home reveals where outdoor heat is infiltrating the air-conditioned interior. Bright red vertical lines reveal the location of wooden studs in the wall.



### After (Summer)

Thermal imaging reveals that the wall is a significantly cooler green with the addition of FullbackV insulation to the exterior.



## Beautiful Appearance

When you make an investment in new siding, you expect it to look great for a long time to come. Unfortunately, many siding products don't look as good as they promised, or their appearance degrades over time through exposure to the elements.

The insulation component helps create a great looking exterior by leveling the wall under the siding, reducing imperfections in the wall. The contoured insulation also provides more support to the siding panel, helping it maintain its shape and original appearance over time.

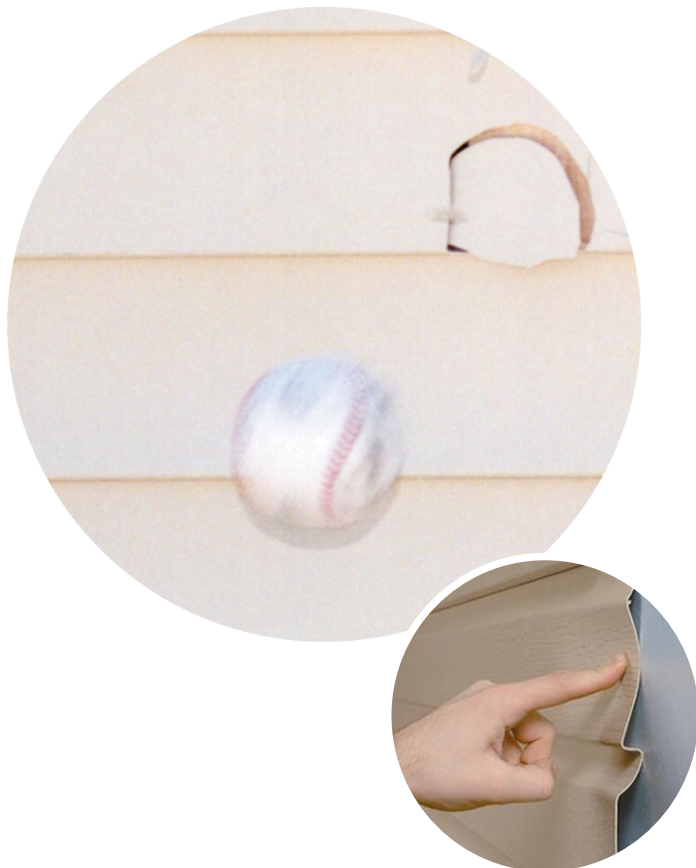


## Significantly Increased Durability

Most siding products are made to make a home look great, but they aren't designed to provide protection for the house. In fact, traditional vinyl siding products create a hollow void between the back of the siding and the wall, leaving the siding itself susceptible to damage when hit by things like hail, rocks thrown from the lawnmower, or a child's baseball.

Insulated siding provides significantly increased durability compared to traditional vinyl siding. The contoured foam insulation serves as a shock absorber against impact. Insulated siding stands up to the elements, whether they be from mother nature or man made.

**Hollow Vinyl Siding**



**Insulated Vinyl Siding**





## Other Benefits of Insulated Vinyl Siding

### A More Comfortable Home

By wrapping your home in insulated siding, the inside temperature can be more consistent room to room. The insulation also helps dampen sounds from the exterior, making the interior more quiet.

### Termite Protection

The foam insulation is treated with an insecticide that is safe for people and pets, but protects the insulation from termite damage.

### Moisture Management

Insulated siding features a perm rating of up to 5.0, allowing your home to breathe and protecting against moisture damage.

Despite some misconceptions in the industry that the insulation can contribute to moisture problems, studies completed with the National Association of Homebuilders Research Center proves that insulated vinyl siding actually keeps the wall system drier and more protected than most other siding system available on the market today.



## CHAPTER THREE

# Cost and Estimated Return on Investment



One of the most common questions we receive from homeowners that are shopping for new siding is: **How much does insulated vinyl siding cost?**

This question is very difficult to answer because every home is different, and there are many options for material, profile, color, and brand on the market today. Buying new siding is similar to buying a vehicle; prices can vary drastically based on which options you select.

Do you need a car, van, or truck? Do you prefer all-wheel drive, power windows, leather or cloth interior? How about a sunroof, chrome finishes, a backup camera or GPS? Do you prefer a two-door or four-door, maximum gas mileage or more towing capacity? If you're commuting an hour each direction every day or using your vehicle as a work tool to get the job done, your needs may be drastically different.

**Things that can impact insulated vinyl siding cost are:**

Location of the home

Size of the home

One, two, or three stories

What siding is currently on the home

Will the old siding need to be removed first

If any previous damage to the home is discovered after siding is removed

Number of windows, doors, and other openings that must be worked around

Standard or premium profiles be used, such as shake, board and batten, etc.

Lighter shades or premium, darker colors

Accent trim package selected

Time of year the siding is installed

Adding housewrap or another weather resistive barrier

Additional features to protect against damage from moisture or pests

Energy savings rating (r-value) of the insulation

Qualifications of the installation company - licensed, bonded, insured?

## General Pricing Guidelines for Insulated Vinyl Siding

In general, insulated vinyl siding costs anywhere from \$4.00 - \$12.00 per square foot installed, although some projects may fall outside this range. The grade of siding, the accessory package, the qualifications of the installer, etc. can all significantly impact the cost of the project. Insulated vinyl siding is typically more expensive than traditional non-insulated siding, but comes with valuable benefits. To learn more about the benefits of insulated vinyl siding, check out [What is Insulated Siding: Materials, Pros, Cons, and Installation](#)>

Insulated vinyl siding is typically made with high grade vinyl siding to better protect it from damage, fading, or warping. It is also available in more premium profiles such as double 6" or single 7" and darker, richer colors than traditional vinyl.

During the manufacturing of insulated siding, the contoured foam insulation is permanently adhered to vinyl siding, giving it more stability but adding a step in the process. To see this process in action check out this video on [Making Insulated Vinyl Siding](#).

Due to the added thickness of the foam, fewer pieces can fit in a box than traditional siding, making it slightly more expensive to ship to a job.

The thickness can also require additional steps during installation. Special accessories and trim work around windows and doors can be required, adding to the cost of the job.



## Return on Investment for Insulated Vinyl Siding

The Cost vs. Value report, published by Remodeling Magazine, provides an estimate of how much cost from home improvement projects will be recouped by adding value to the home.

The 2017 report shows that a siding replacement recoups 76.4% of the cost, significantly better than a bathroom addition (53.9%), major kitchen remodel (65.3%), roof replacement (68.8%), or even replacing windows (73.9%).

Therefore, if your new siding cost \$20,000, you could expect to recoup \$15,280 dollars in added value to your home, leaving the true cost at \$4,720.

Insulated vinyl siding will also reduce the heating and cooling costs for your home, helping to pay back the original cost over time.

## Financing Options

Another benefit of working with a professional contractor to install insulated vinyl siding is that many offering financing options, some with zero or low-interest rates, to help spread out the cost of new siding.

With some standard options available to insulated vinyl siding contractors such as Greensky Financing, a \$20,000 siding job can be financed for as low as \$250/mo. For 120 months.

This way you can hold onto your money longer and spread out the expensive of a new siding job over a longer period of time.



## CHAPTER FOUR

# How to Install Insulated Vinyl Siding

## Tools You Need

Hammer  
Square  
Chalkline  
Level  
Tape Measure  
Safety Glasses  
Utility Knife



## Table or radial-arm saw

Using a saw can help speed up cutting insulated vinyl siding panels and soffit. You must use a fine-tooth plywood blade installed in the reverse direction to appropriately cut the panels. Take care to saw slowly in extremely cold weather to prevent chipping. A fine-tooth hand saw can be used as an alternative.

## Tin Snips

Good quality snips or compound aviation-type snips will speed the cutting and shaping of the vinyl.

## Optional Tools to Make the Job Easier

**Snap Lock Punch** - Used to punch lugs in the cut edges of siding to be used for the finishing course at the top of a wall, or underneath a window.

**Nail Hole Slot Punch** - Occasionally it may be necessary to elongate a nail hem slot to hit a stud and allow for expansion and contraction.

**Zip Lock (Unlocking) Tool** - Remove or replace a siding panel by inserting the curved end of the tool under the end of the panel and hook onto the back lip of the buttlock. To disengage the lock, pull down and slide the tool along the length of the panel. Use the same procedure to relock the panel. (would be a good place for a tip of the week video)

## Terms to Know

There are many terms related to insulated vinyl siding that are important to know during installation. Refer to VSI's detailed installation guide for a complete list of important terms. Below are just a few:

**Drip Cap / Head Flashing** - accessory installed with vertical siding to ensure that water drips away from panels.

**Face** - part of the siding that is showing once the panel has been installed.

**Face Nailing** - fastening directly onto the face of the siding panel, instead of using a nail hem slot. This practice is generally not used in vinyl siding installation except under special circumstances.

**Flashing** - A thin, flat material positioned under/behind j-channels, corner posts, windows, etc. to keep draining water from penetrating the home.

**Fascia** - trim covering the ends of the roof rafters.

**Lap** - to overlap the ends of two siding panels or accessories to allow for expansion and contraction.

**Miter** - to make a diagonal cut, beveled to a specific angle (usually 45 degrees).

**Nail Hem** - section of siding or accessory where nail slots are located.

**Weep Holes** - openings cut into siding or accessories to allow for water runoff.

## Selecting a Fastener

When installing insulated vinyl siding, use a galvanized, stainless steel, or aluminum nail - something that won't rust.

Roofing nails with a 3/8" diameter head work well with vinyl siding. The Vinyl Siding Institute recommends using a nail that will penetrate at least 1-1/4" into the nailable surface.

With hollow vinyl siding, a 1-1/2" nail can be used. Insulated vinyl siding requires at least a 2" nail to accommodate the additional thickness of the insulation. When in doubt, always use a slightly longer nail.

Check your specific insulated vinyl siding manufacturer's instructions when determining the length required for your particular product.



The majority of the installation steps below are applicable to both vinyl siding and insulated vinyl siding, with a few differences that account for the additional thickness of the installation with the latter.

## #1: Remove Old Siding (If Necessary)

Depending on your particular project, you may or may not need to remove the old siding before insulated vinyl siding (IVS) is installed.

Traditionally, siding products such as vinyl siding, aluminum, and steel need to be removed. IVS can typically be installed over wood siding as long as it is free from damage and doesn't create major projections from the wall.

## #2: Correct Any Damage to the Wall

Insulated vinyl siding should be installed over a sheathing such as plywood or oriented strand board (OSB) that provides a smooth, flat surface. IVS should never be installed directly to studs without sheathing.

If you find any damage from moisture, pests, impact, or other sources after you have removed the old siding, it will need to be corrected before new siding is installed. It is typically impossible to correct damage to a wall after siding has been installed, so take advantage of this opportunity to correct any issues beforehand.

Cut out the damaged sheathing and replace with new pieces, secured to the studs per the manufacturer's instructions.





### #3: Add a Weather Resistive Barrier & Flashing

If there is any loose caulk around windows or other openings, scrape it off and re-caulk to protect from moisture penetration.

It is a best practice to install a weather resistive barrier (WRB) such as house wrap to stop the intrusion of bulk water, although not every condition will call for it. Check your local building code requirements for your geographic area.

Code-compliant flashing around all windows, doors, and other openings should be integrated with the water-resistive barrier.

Flashing can also be applied to corners and at the intersection of walls and roofing. Many WRB manufacturers have tapes that can be paired with their house wraps to easily flash these openings.





## #4: Install Accessories

Begin with the **starter strip**, which must be level in order for the siding to be installed perfectly level. Snap a level chalk line at the base of the wall all the way around the house.

Using the chalk line as a guide, install the top edge of the starter strip along the line, securing a nail every 10". Be sure to leave a space for all corner posts and j-channels. Keep  $\frac{1}{4}$ " space between all starter strips to allow for expansion and contraction.

Make sure to use the appropriate starter strip to accommodate the additional thickness of the insulation.

An **insulating starter adapter** should also be used to appropriately start the first course of siding, provide complete insulation and protection at the base of the wall, where siding is most exposed to sources of impact damage. Check out the video below on using an insulated starter adapter.

Next are the **outside and inside corner posts**. Place the corner post into position, allowing a  $\frac{1}{4}$ " gap between the top of the post and the eave or soffit. Attach with a nail at the top of the highest slot on the post - the post will hang from this nail. The post should extend  $\frac{3}{4}$ " below the starter strip. Place all other nails in the center of the slot to allow for expansion and contraction.

When using **insulating corner post inserts**, it is helpful to cap the bottom of the post to hold the insulation in place. Check out our video detailing this quick trick>

## #5: Trim Windows, Doors, and Other Openings

One of the trickier parts of insulated vinyl siding installation is installing j-channel or your preferred trim around all windows, doors, and other openings. Be sure to use the available wider j-channel trim to accommodate the added thickness of the insulation. If you aren't sure which j-channel is required for your job, check out our video guide to selecting j-channel [here](#) >

Once you have selected your j-channel, you must appropriately cut and notch it to fit around all openings. The top piece will need to be notched and bent to provide flashing over the side j-channels. The bottom end of side j-channels will also need to be notched and bent into the bottom j-channel. Our video details how to cut j-channel to appropriately fit around all openings. Watch it [here](#) >

In some cases, you may have to build out the window before installing the trim if the insulated vinyl siding is thicker than the window jamb. This can be done in many ways, but a popular method is to surround the window in wood 2x4s, cap it with aluminum coil, then install the j-channel up against it. Watch the video below for full instructions on how to build out a window.

J-Channel must also be installed over roof lines. Keep the j-channel a minimum of  $\frac{1}{2}$ " from the roofing material. Extend the j-channel past the edge of the roof to ensure proper runoff. If it is necessary to use more than one piece, overlap the j-channel, with the upper piece going over the lower piece to allow for proper drainage.

When installing j-channel under gables, let one of the sections butt into the peak with the other section overlapping. A miter cut can be used here for a better appearance. If more than one piece of j-channel is required, be sure to overlap the channels by  $\frac{3}{4}$ ".

Special accessories such as mounting blocks are available for other projections such as water spigots and lights.

## #6: Install Insulated Vinyl Siding Panels



The first course of insulated vinyl siding should be placed in the starter strip and securely locked along the entire length of the siding panel before fastening. Nails must be long enough to penetrate into the nailable sheathing a total of 1-¼". Check out this video on selecting the proper fastener for your job>

Nails should be placed in the middle of nailing slots to allow for expansion and contraction. For this same reason, do not drive the head of the nail tightly against the slot, but rather leave approximately 1/32", or the thickness of a dime.

When overlapping insulated vinyl siding panels, no gap is needed. Simply butt each piece of foam together.

Once the first course is securely attached, continue up the wall by locking subsequent panels into the previous piece, then nailing to the wall. For best appearance and moisture management, stagger the laps, so no two courses are aligned vertically.

It's a good idea to check every fifth or sixth course for horizontal alignment with a level. Also, check siding alignment with adjoining walls.

Always overlap joints away from entrances or the greatest point of traffic. This will reduce the appearance of the seams and provide the best overall appearance.

When using vertical panels instead of traditional horizontal panels, installation of horizontal furring strips may be required. You will want to install j-channel at the top and bottom of the wall using a chalk line to ensure level. To create a balanced appearance with vertical siding, make sure the first and last pieces on the wall will be the same dimension, similar to installing flooring.

## #7: Finishing at Tops of Walls and Gables

Any soffit accessories that will be used on the eaves must be installed before the final course of insulated vinyl siding can go up.

To install around gable ends, make a pattern that duplicates the slope of the gable by holding a short piece of siding against the j-channel at the slope. Mark the slope with a pencil on the short piece of siding. Cut along the pencil line as a pattern, which you can use to cut the actual insulated vinyl siding panels to be installed.

If it is necessary to fasten the last panel at the gable peak, use a 1- $\frac{1}{4}$ " to 1- $\frac{1}{2}$ " trim nail. This should be one of the few times a nail should be used on the face of vinyl siding.

The last piece of siding at the top of the wall may need to be cut horizontally. Typically insulated vinyl siding can be thick enough to secure tightly into the j-channel, but utility trim can be used inside the larger j-channel for a tighter fit if necessary.





## **#8: Soffit Installation if Applicable**

Soffit is used to enclose the underside of an eave. If you are replacing the soffit on a remodel, or installing on a new home, begin by installing receiving channels, such as soffit receiver, j-channel, or f-channel.

There are many configurations for soffit and receivers; you will want to determine which method is right for your particular application. We recommend checking out pages 33-37 of the Vinyl Siding Institute's installation guide for specifics for your job.

## **#9: Install Shutters and Other Accents**

When installing shutters or other accents, pre-drill holes through the shutters for attachment screws, then hold the shutter up to the desired location and mark it on the siding. Use a drill to make expansion holes in the siding where the attachment screws will be located, a minimum of ¼" larger than the diameter of the screw being used. Do not fasten the shutter such that it is tight against the siding, otherwise, the expansion of the siding will be restricted.

Full more detailed instructions, refer to the Vinyl Siding Institute's installation manual [here](#)>

# Top Insulated Vinyl Siding Brands



We invented insulated vinyl siding at PFT over 20 years ago, and have partnered with all the major vinyl siding manufacturers to create many variations of insulated vinyl siding.

With so many brands of insulated vinyl siding available on the market these days, it can be difficult to determine which products are best for your project. We are frequently asked which options are the best, and what the differences are between them.

To help make the decision process easier, we've listed the top insulated vinyl siding brands below, in alphabetical order.



## Craneboard Solid Core Siding

**Manufacturer:** Exterior Portfolio

**Profiles:** Double 6, Double 7, Board & Batten

### What We Like:

The insulation in CraneBoard is manufactured differently than the contoured insulation paired with most other vinyl siding products; it is shape molded, which allows the foam to feature built-in drainage grooves and improved strength. Craneboard is also made with Neopor insulation, which provides more r-value than comparable insulation made of standard white EPS. (More info on Neopor here>). Finally, the Exclusive TXL Lamination Technology provides greater surface adhesion between the foam and the siding. More info>

## CedarBoards Insulated Siding

**Manufacturer:** Certainteed

**Profiles:** Double 4", Double 6", Single 7", Double 4.5" Dutch, 12" Board and Batten

### What We Like:

CedarBoards Single 7 and Double 6 profiles are available in longer lengths of 16'8". This creates fewer seams when installed on the wall for a more premium look. Panels are made from .044" thick vinyl and feature a TrueTexture rough cedar finish, which is molded from real cedar boards. A 3/4" panel projection helps create a more dramatic shadow line and a like-real-wood appearance. More info>

## CedarMax Insulated Siding

**Manufacturer:** Provia

**Profiles:** Single 7, Double 6", Triple 4", 8" Board & Batten

### What We Like:

Cedarmax features a high wind load test of up to 227 miles per hour to help stand up to Mother Nature's toughest conditions. Longer 16'-2.5" panels lengths are standard across the product line, and they offer up to 30 colors depending on profile. More info>

## Haven Insulated Siding

**Manufacturer:** Royal Building Products

**Profiles:** Double 6", Double 7", Double 4.5" Dutch

**What We Like:** Traditional, Premium, and Dark color options allow you to customize the look of your home with striking color palettes. The dedicated Designer Trim package was accurately proportioned by professional designers to accent the traditional clapboard appearance. More info>



## Prodigy Insulated Siding

**Manufacturer:** Alside

**Profiles:** Double 6", Double 7", Double 5" Dutch

**What We Like:** Prodigy Insulated Siding features 1-½" contoured insulation, the thickest on the market today to provide one of the highest energy savings ratings. Unlike other insulated vinyl siding, it is made with a stack lock design, which insures a perfect installation and seals the panel together to help lock out air and moisture. Extended length 16'8" panels for fewer seams on the wall are standard. [More info>](#)

## Structure Home Insulation System

**Manufacturer:** Mastic by Plygem

**Profiles:** Double 4", Double 6", Single 7", Double 4.5 Dutch

**What We Like:** Structure Home Insulation System comes in 16' longer lengths for fewer seams and features a ¾" butt height for a more realistic shadow line. The patented T3-LOK tightens the lock under pressure, so siding stays put even in challenging weather. Structure is also made with a minimum of 50% recycled content. [More info>](#)

## Honorable Mention

There are many other brands of insulated vinyl siding available on the market today, although they might not be as well known. Follow the links below to learn more about these brands, which offer their own unique features and benefits.

**American Essence** - Manufactured by Napco

**ClimaForce** Climaforce - Manufactured by Variform

**InsulPlank II** - Manufactured by Mitten

**Polar Wall Plus** - Manufactured by Norandex

**Sovereign Select** - Manufactured by Revere

**Sequoia Select** - Manufactured by Gentek

**Timbercrest** - Manufactured by Kaycan

## How to Decide Which Brand of Insulated Vinyl Siding is Right For You?

Every home is different, and the features and benefits of the insulated vinyl siding required for your project can vary drastically. A few things that can impact which brand is best for you are:

- **Location** - Some brands are only available in certain areas of the U.S. or Canada.
- **Your Design Preferences** - Certain profiles, colors, and styles of insulated vinyl siding are only available in certain areas of the country, or are only produced by certain manufacturers.
- **Features & Benefits** - Depending on which benefits are most important to your project, you may be guided to different brands of insulated vinyl siding. Some feature higher r-values for more energy savings, some feature built-in moisture management systems to protect from mold and mildew damage, and much more. Determine which features are most important to help narrow your selection.
- **Price** - As with any product, the design, features, and benefits selected can significantly change the price of the siding. Premium colors, profiles, accessories, and installation methods can all impact the price. For more information check out the [Insulated Vinyl Siding Price Guide](#)>

When shopping for insulated vinyl siding, it's a good idea to visit the manufacturer's websites and consult with a trade professional who can make a recommendation based on your specific needs. Once you know which brand of insulated vinyl siding is the best fit for your needs, you will want to select a contractor that carries that particular product line. Check out our guide for selecting a contractor for the job >



# Ready to Find an Insulated Vinyl Siding Contractor?

## We Can Help!

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If you're looking for a siding contractor, our network of top-notch companies only install certified insulated vinyl siding and are equipped with the best warranty in the marketplace today.

[FIND A CONTRACTOR](#)