



Continuous Insulation

The Key to Building Comfort and Energy Efficiency



Building Energy-Efficient Homes to Meet the Demands of Today's Buyers

Energy efficiency is at the forefront of new home construction. The move toward more sustainable practices in residential construction is being propelled by multiple factors: the drive to decarbonization, tightening building codes, and even expanded financial incentives. The most important factor is buyer preference. To remain successful, you must meet homebuyers' expectations for energy-efficient, healthy, and comfortable homes.

Insulation remains a critical construction component. It's also one of the fastest ways to reach energy efficiency goals. To reduce heat gain in the summer and heat loss in the winter, a home should be properly insulated from the roof to the foundation. Among the various insulation options, continuous insulation is one of the simplest methods to improve energy efficiency.



Understanding Continuous Insulation

Continuous insulation (ci) refers to a method of insulation where a continuous layer of insulation material is applied to the exterior of a home. Unlike traditional cavity insulation, ci provides a seamless barrier against heat transfer, preventing the frame from serving as a thermal bridge between the interior and exterior of the home.



- 1 Cavity Insulation
- 2 Wood Framing
- 3 Sheathing
- 4 Continuous Insulation
- 5 Cladding

Four Continuous Insulation Benefits for Homeowners



ENERGY EFFICIENCY

Continuous insulation significantly reduces heat loss or gain through walls. Maintaining stable indoor temperatures lowers energy bills all year.

ENHANCED COMFORT

Gaps in insulation cause uncomfortable temperature fluctuations. With continuous insulation, homes remain comfortable regardless of external weather conditions.





MOISTURE MANAGEMENT

In addition to their thermal properties, quality continuous insulation solutions are moisture resistant and contribute to defending against moisture infiltration, preserving the integrity of the home.

DURABILITY & LONGEVITY

A protective layer of continuous insulation contributes to the wall system by shielding the structure from environmental exposure, extending the lifespan of the home. Homeowners can enjoy peace of mind knowing their homes are built to withstand the test of time.



Code Compliance and Energy Incentives



Since 2012, the International Energy Conservation Code (IECC) has prescribed continuous insulation in the building envelope in nearly all climate zones.

Energy code provisions outlined in the 2021 IECC Residential Code introduce significant changes that directly impact prescriptive insulation and air sealing requirements. Continuous insulation is one path to achieve insulation requirements.

Beyond code requirements, continuous insulation can contribute to ENERGY STAR or Zero Energy Ready Homes (ZERH) certification by reducing air leakage and eliminating thermal bridging.

45L New Energy Efficient Home Credit

\$2,500 CREDIT PER DWELLING

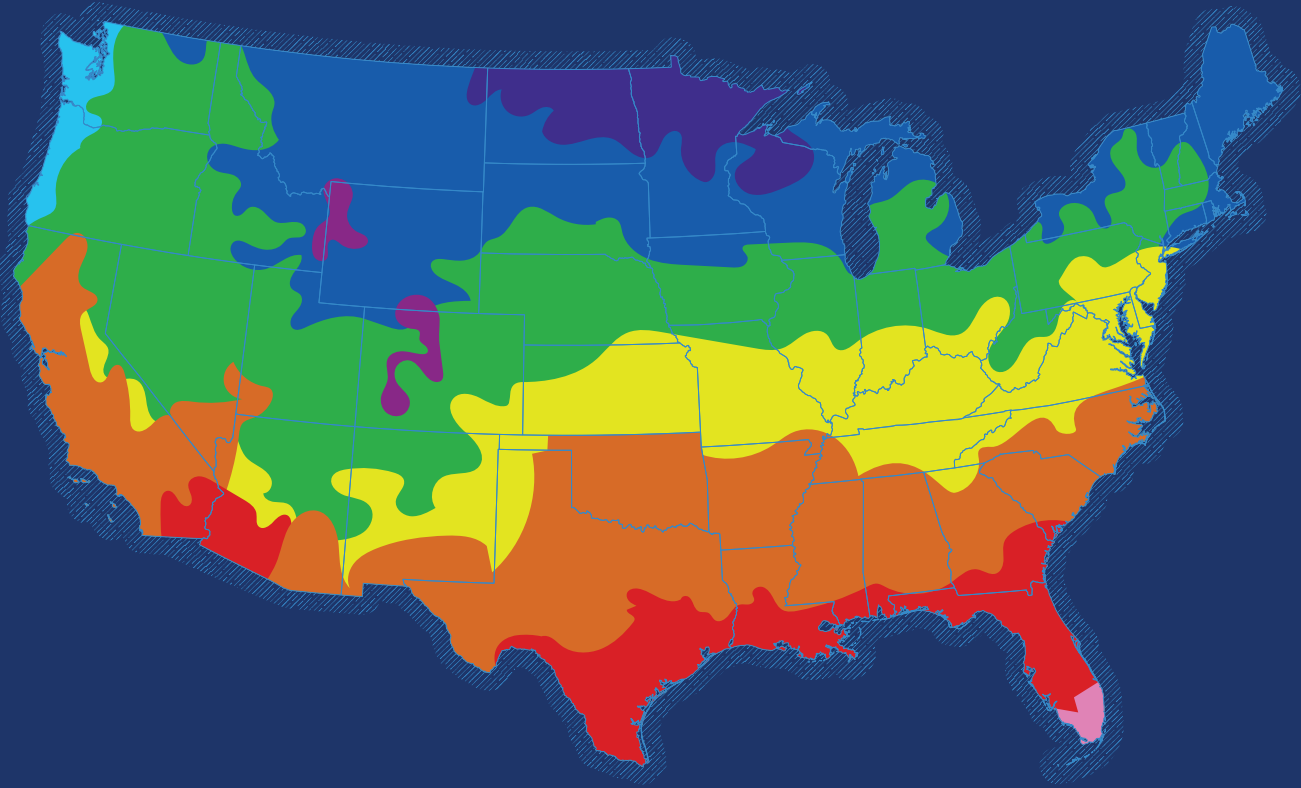
Certified to
ENERGY STAR® requirements

\$5,500 CREDIT PER DWELLING

Certified to Zero Energy Ready
Home (ZERH) requirements

Beyond federal credits, builders can also take advantage of state and local incentives for significant financial impact per home.





CLIMATE ZONE	WOOD FRAME WALL R-VALUE REQUIREMENTS FOR 2021 IECC
 Climate Zone 1 : Very Hot / Humid	13 or 0 & 10 ci
 Climate Zone 2 : Hot-Humid / Dry	13 or 0 & 10 ci
 Climate Zone 3 : Warm - Humid / Dry / Marine	20 or 13 & 5 ci or 0 & 15 ci
 Climate Zone 4 : Mixed – Humid / Dry	30 or 20 & 5 ci or 13 & 10 ci or 0 & 20 ci
 Climate Zone 4 Marine : Mixed - Marine	30 or 20 & 5ci or 13 & 10 ci or 0 & 20 ci
 Climate Zone 5 : Cool - Humid / Dry	30 or 20 & 5ci or 13 & 10 ci or 0 & 20 ci
 Climate Zone 6 : Cold - Humid / Dry	30 or 20 & 5ci or 13 & 10 ci or 0 & 20 ci
 Climate Zone 7 & 8 : Very Cold	30 or 20 & 5ci or 13 & 10 ci or 0 & 20 ci

Adapted from 2021 International Energy Conservation Code (IECC), Table R402.1.3 Insulation Minimum R-Values and Fenestration Requirements by Component

Choosing the Right Material

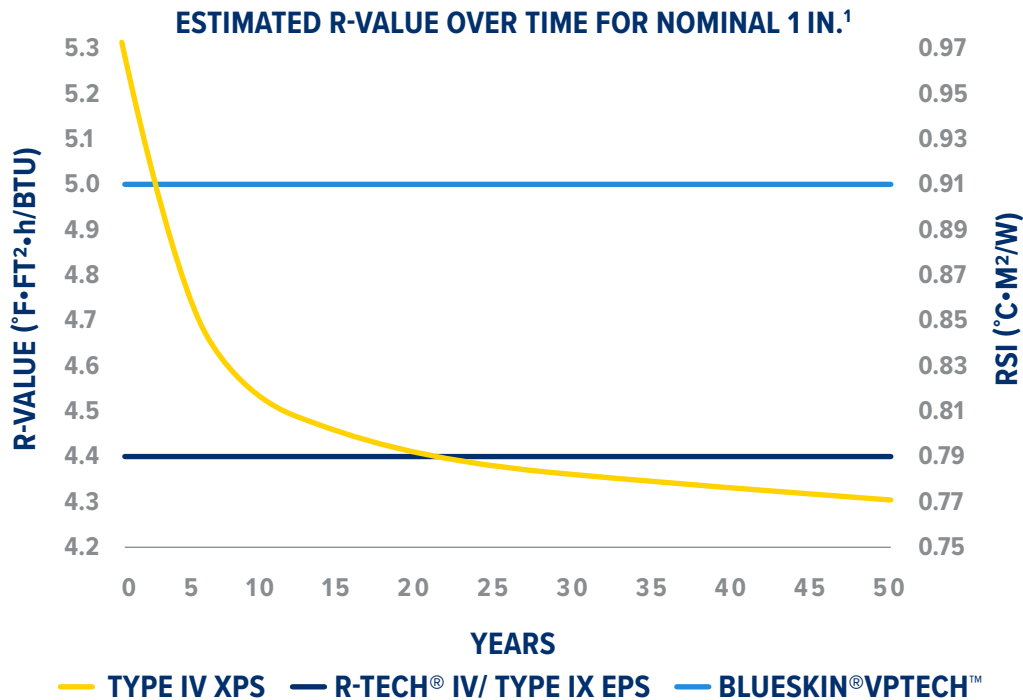
Among the three rigid foam insulations made of polystyrene – expanded polystyrene (EPS), graphite polystyrene (GPS), and extruded polystyrene (XPS) – EPS and GPS have a higher R-value per dollar, making them well-suited for cost-effective continuous insulation. Henry R-Tech® (EPS) and Blueskin® VP Tech™ (GPS) are made from rigid, tough closed-cell foam that provides R 4.0 – R 5.0 per nominal inch of thickness*. EPS and GPS are also the most versatile rigid insulation materials, offering stable thermal performance over time. Both can be used throughout the building envelope – roof, walls, floors, and below grade.

**Nominal inch = 1.06 in.*

Advantages of EPS vs. XPS

PERMANENT R-VALUE

EPS and GPS do not experience thermal drift. They maintain 100% of their original R-value over their entire service life.

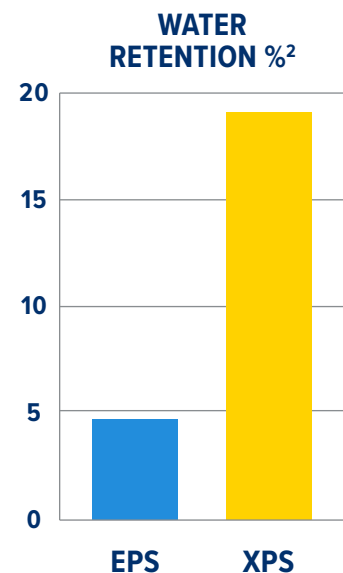


EXCELLENT DRYING POTENTIAL

While resistant to moisture, EPS and GPS easily allow water vapor to dry quickly retaining a high R-value.

SUPERIOR MOISTURE RESISTANCE

As a closed-cell polystyrene foam, EPS and GPS are naturally water resistant. Short-term laboratory tests conducted for only 24 hours have misled builders about the realistic performance of EPS and XPS. **In long-term exposure studies using real-world application of continuous insulation, EPS demonstrates much lower water absorption than XPS.**



¹EPS Industry Alliance Study: Polystyrene Foam Insulation in Long-Term Building Applications – Effective R-values

²EPS and XPS results based on independent test of Expanded Polystyrene referenced in Technical Bulletin - EPS Industry Alliance, 2014.

Continuous Insulation Systems for Any Climate, Any Budget, Any Project

Henry offers EPS and GPS products in a range of options to upgrade the thermal insulation value of your exterior walls. Combine them with our simple 3-step WRB system for a complete residential building envelope system from a single, reliable source. No matter your building materials, codes, construction methods or climate, Henry will help keep the homes you build safe, dry and energy efficient.

R-Tech®

An engineered rigid insulation with excellent dimensional stability, compressive strength and water resistance consisting of a superior closed-cell, lightweight, resilient EPS core with printed and metallic-reflective polymeric facer options.

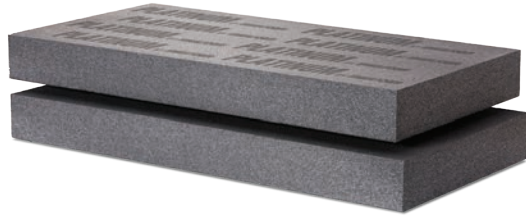


- ✓ Water-resistant facer
- ✓ Extremely flexible and durable
- ✓ No thermal drift during the entire service life
- ✓ More cost effective than other rigid foam options
- ✓ 100% recyclable foam

R-VALUE 3.9 per 1" / 4' x 8' panels / 1/2", 1", 1 1/2", 2" and 3" thickness

R-Tech® Platinum

Rigid GPS insulation designed to maximize insulation performance while maintaining a lightweight, thin product ideal for use in space-constrained areas or colder climates.



- ✓ Higher R-value for same thickness
- ✓ 100% warranted long-term, stable R-values
- ✓ Long-term moisture management
- ✓ More cost effective than other rigid foam options

R-VALUE 5.0 per nominal 1" / 4' x 8' panels / Various thicknesses available

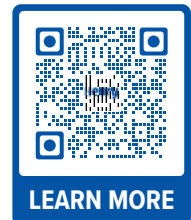
Actual thickness to achieve R 5.0 = 1.06"

Blueskin® VPTECH™

A new, innovative integrated panel that combines a WRB, R5 GPS continuous insulation, and a seam-sealing solution into a single-step product.



- ✓ Installs up to 30% faster¹
- ✓ Improved thermal and moisture protection with less effort
- ✓ Lightweight and easy to cut
- ✓ Integrated seam sealing strip creates continuous air barrier
- ✓ Self-seals around nails and fasteners for maximum moisture protection



LEARN MORE

R-VALUE 5.0 per nominal 1" / 4' x 8', 9', 10', 11', 12' panels
Nominal 1/2", 1", 1-5/8", 2-1/4" thicknesses

Actual thickness to achieve R 5.0 = 1.06"

¹Based on time savings from installing sheathing, continuous insulation, and water resistive barrier as separate components. Installation time trials conducted by Henry with independent installers, August 2023.

A Partnership Designed to Build Confidence™

With Henry, you benefit from a single source supplier with local teams who understand the needs of your market. We provide dedicated customer & technical service support and can recommend a network of certified installers. Henry trained contractors will help ensure your homes will be completed right the first time, reducing liability, and keeping schedules on track.

WE HELP NAVIGATE CODE CHANGE

Our team understands regional challenges and opportunities related to code and above-code programs.

WE IDENTIFY SMALL CHANGES FOR A BIG IMPACT

Our compatible building envelope systems can be customized based on construction methods, climate zone and budget. We can help you compare options to determine the most cost-effective solution.

WE SUPPORT PROJECTS FROM START TO FINISH

From energy modeling to installation support, our team is here to help ensure homeowner satisfaction.

WE WARRANTY OUR SYSTEM FOR 30 YEARS

Select a compatible, integrated system from our family of leading-edge building products for a 30-Year Residential Building Envelope System Warranty.



Building Envelope Systems®

Roofing | Air Barrier | Waterproofing



Ask us about other Henry® solutions that help manage the flow of water, air, vapor and energy.

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