

Blueskin® VPTECH™

SYSTEM INSTALLATION MANUAL



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1. Introduction

This installation manual includes materials and installation procedures for Henry® Blueskin® VPTECH™ Continuous Insulation with Thermal, Air and Moisture Protection. Blueskin VPTEch meets the IRC and IECC continuous insulating sheathing, air barrier, WRB, and vapor retarder requirements and IBC WRB and vapor retarder requirements as referenced in TER 2309-01. Designed as an integrated panel solution with thermal, air and water barrier, and seam sealing solution for exterior wall construction, Blueskin VPTEch allows for the outward passage of water vapor, avoiding the risk of condensation build-up in exterior wall assemblies.

1.01 Continuous Insulation

Blueskin VPTEch utilizes graphite polystyrene (GPS) rigid insulation as part of the integrated panel to achieve continuous insulation (ci) for above grade wood-framed exterior wall construction. Unlike traditional insulation methods that may leave gaps and thermal bridges, ci provides a seamless barrier against heat transfer. Continuous insulation is typically used in conjunction with an additional wall cavity insulation to meet the IECC.

- Refer to relevant product Technical Data Sheet (TDS) for product specific information.

1.02 Air Barrier Considerations

Blueskin VPTEch provides protection within the exterior wall assembly against the intrusion of water and uncontrolled air leakage, and allows the exterior wall assembly to dry. The included seam sealing solution must be utilized and where not available due to cuts for detail work, additional tape must be used to seal all seams.

- Penetrations, substrate transitions and connections around window and door flashings are an essential and critical element to manage water, air, vapor and drainage to the exterior. The Blueskin VPTEch system shall be completed to seal air leakage pathways and gaps. Typical air leakage pathways may include, but are not limited to, the following:
 - Connection of ci panels inclusive of WRB
 - Connections of the wall to roof
 - Connections of the wall to foundation
 - Construction joints
 - Window and door rough openings
 - Pipe penetrations
 - Fastener and bolt penetrations

1.03 Building Code Standards

The information in this installation manual should be adapted to suit the requirements of individual projects. It is recommended to consult with design professionals to determine compliance with applicable codes and regulations. This installation manual is based upon the following industry standards, recognized by window manufacturers, installers, code officials, building envelope consultants and design professionals.

- American Architectural Manufacturers Association (AAMA):
 - AAMA 711 - Voluntary Specification for Self-Adhering Flashing Used for Installation of Exterior Wall Fenestration Products
- American Society for Testing Materials (ASTM):
 - ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
 - ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
 - ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials
 - ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials
 - ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
 - ASTM E2178 - Standard Test Method for Air Permeance of Building Materials
 - ASTM E2273 - Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish

2. Blueskin VPTEch Insulated WRB System

Henry defines an insulated weather resistive barrier system as the installation of Blueskin VPTEch and authorized system components. Blueskin VPTEch is designed to be installed in conjunction with Henry authorized system products to create a thermal barrier, air barrier, and moisture control system that manages long-term protection of residential and light commercial buildings, including long-term R-value, uncontrolled air leakage, water penetration and energy loss.

2.01 Warranties

Warranty options	Warranty duration	Warranty description
Product warranty	One (1) year	Products warranted individually
Assembly warranty	Thirty (30) years	Blueskin VPTEch and authorized system products warranted collectively as part of Henry 30-Year Residential Building Envelop System Warranty*

* Visit henry.com/warranty for eligibility requirements. Henry offers Blueskin VPTEch in the United States. Product availability and warranty options may vary by location.

2.02 Blueskin VPTech System Components

System components	Product name	Product description
Primary product	Blueskin VPTech Insulated WRB System	Insulated WRB integrated panel
Auxiliary materials	Blueskin VP100	Joint tape width for this system
	Blueskin Zero Flash	Self-adhered flashing
	Blueskin Butyl Flash	Self-adhered flashing
	FortiFlash® Butyl	Thru-Wall flashing
	FortiFlex® Butyl	Self-adhered flashing
	Air-Bloc® LF Liquid-Applied Flashing	Liquid-applied flashing Termination sealant**
	Moistop® Sealant	Building envelope sealant Termination sealant**
	Moistop® Corner Shield	Pre-formed corner flashing
	Aquatac™ Primer	Primer for self-adhered flashing
	WeatherSmart® Rainscreen	Rainscreen drainage mat

**Refer to Blueskin VPTech details for termination sealant applications.

2.03 Component Compatibility

Non-compatible adhesive and sealant solvents, which attack Blueskin VPTech include esters, ketones, ethers, aromatic, and aliphatic hydrocarbons and their emulsions, among others. Blueskin VPTech is not to be placed in contact with materials (or their vapors) of unknown composition. Pretest for compatibility at maximum exposure temperature.

Do not install or use Blueskin VPTech with coal tar pitch, highly solvent extended mastics, or solvent-based adhesives without adequate separation.

3. Installation Considerations

Consider your installation prior to application: sequencing of materials may be dependent on job progress, product or crew availability. Only products offered through Henry and installed as referenced in this installation manual qualify for warranty.

3.01 Safety

First and foremost, job site safety is of prime consideration. Coordinate in advance with job site supervision and follow all site-specific and OSHA safety requirements and recommendations. Be aware of your surroundings at all times. If in doubt, stop all work, remove yourself from immediate danger and speak with your job site supervisor or safety official before proceeding.

3.02 Delivery, Storage and Handling

For product-specific delivery, storage and handling instructions, refer to relevant product Technical Data Sheets (TDS) and Safety Data Sheets (SDS) available at henry.com.

- Materials should be delivered to the job site undamaged and in original packaging indicating the manufacturer and product name.
- Store materials in original packaging, in accordance with relevant product TDS, and conform to applicable safety regulatory agencies.

3.03 Site Conditions

Environmental Requirements

For product-specific characteristics, limitations and suitable weather conditions, refer to relevant product TDS and material SDS available at henry.com.

- Do not install during rain or inclement weather. Do not install materials over frost-covered substrates or surfaces that are wet to touch.
- If applicable, installer should verify compliance with all federal, state and local regulations controlling use of volatile organic compounds (VOCs) on the job site.

3.04 Substrate Conditions and Preparation

Substrate Conditions

Appropriate substrate conditions are critical to obtain proper adhesion; be sure surfaces are ready for product installation and are in accordance with this installation manual.

- Do not install until substrate conditions are in accordance with this installation manual.
- Substrate must be continuous and secure.
- Mechanical fasteners used to secure substrate shall be set flush with substrate and secured into solid backing.
- Adjacent or multiple pipe penetrations through sheathing should be sufficiently spaced apart, typically 4 to 6 inches, to allow proper detailing of individual pipes.

Preparation

Appropriate substrate preparation is critical so be sure surfaces are ready to accept the product and are in accordance with this installation manual.

- Ensure all required preparatory work is complete prior to applying system components.
- Surfaces must be sound, dry to touch, clean and free of oil, grease, dirt, excess mortar, frost, laitance, loose and flaking particles, and other contaminants.
- Repair or replace products that are not installed to create a continuous and secure substrate.
- Cap and protect exposed back-up walls against wet weather conditions during and after application.
- Back side of wall must not be exposed to bulk water after installation.

3.05 Temperature and Exposure Limitations

Optimal temperatures for application of the Blueskin VPTEch system include ambient and substrate temperatures of 40 °F (4 °C) and rising. Refer to application temperature chart below for further clarification.

- Prior to installation, Blueskin VPTEch must be stored in its original opaque UV vented packaging, covering all sides of the product. Store out of direct sunlight.
- Good practice calls for covering the Blueskin VPTEch WRB as soon as possible; not to exceed 150 days.
- Actual temperature limitations may vary by product. Refer to relevant product TDS for product specific information.
- Not all Henry products are designed for permanent exposure. Refer to relevant product TDS for product specific limitations.

Application Temperatures

Minimum Temperature Installation Limitations

System components	Product name	Minimum Application Temperature
Primary product	Blueskin VPTEch panel	32 °F (0 °C)
Auxiliary materials	Blueskin VP100	20 °F (-7 °C)*
	Blueskin Zero Flash	0 °F (-18 °C)
	Blueskin Butyl Flash	25 °F (-4 °C)*
	FortiFlash® Butyl	25 °F (-4 °C)*
	FortiFlex® Butyl	10 °F (-12 °C)*
	Air-Bloc® LF Liquid-Applied Flashing	20 °F (-7 °C)**
	Moistop® Sealant	32 °F (0 °C)
	Aquatac™ Primer	25 °F (-4 °C)

*For installations where the substrate is less than 40 °F (4 °C), an approved Henry primer is required.

**Air-Bloc LF primer recommendations are only applicable at raw edges of exposed compressed gypsum.

3.06 Primer

Blueskin VPTEch is to be mechanically fastened to the substrate. In some cases, for some auxiliary materials, a product’s ability to adhere to a substrate may become compromised and adhesion enhancement may be required to maintain a continuous and secure installation. Primers compatible with auxiliary materials are available at henry.com.

4. Installation

Blueskin VPTEch combines a weather resistant barrier, continuous insulation, and an innovative pre-applied seam sealing design to protect against moisture intrusion and air leakage. Designed for mechanical fastening to wood-framed residential and multi-family construction of three stories or less, it provides thermal, water, vapor and air protection and control, contributes to meeting the IECC 2021 code for continuous insulation.

4.01 Planning Material Installation

Prior to installation of the Blueskin VPTEch system, it is important to understand installation recommendations. This will help ensure system assembly integrity, minimization of waste and proper sequencing.

- Where detailed cuts are required, additional joint tape material may be needed to seal panels where a pre-applied flap could not be utilized. Any horizontal reverse lap will require termination sealant.
- Auxiliary products like flashing and sealant should be gathered based on Blueskin VPTEch details located at henry.com
- Installation will begin at the bottom of the structure. Panels are to be oriented horizontally lengthwise with the 2" continuous flap at the bottom. Panels are to be installed in shingle fashion at overlaps, to properly shed water and avoid reverse laps. Any horizontal reverse lap will require termination sealant.

4.02 Blueskin VPTEch Installation Procedures

Preparation

- Refer to Blueskin VPTEch details for requirements located at henry.com.
- Remove Blueskin VPTEch panels from original opaque UV vented packaging as needed. Store remainder of panels out of direct sunlight.

Installation

Apply Blueskin VPTEch with mechanical fasteners to a wood framed, fully sheathed, above grade exterior wall.

1. Remove any obstacles from the wall that may interfere with the attachment. Note: The wall to receive the board must be braced or sheathed in compliance with the applicable building code.
2. Start installation in the lower left corner, with the long edge of board placed horizontally with flap facing downward. Where above grade wall meets the sill plate, the horizontal flap may be removed if desired.
3. Attach using corrosion-resistant cap-nail, large head roofing nail or 1" wide crown staples through insulation and into the wood studs with a minimum 1" penetration. Fastener spacing shall be a maximum of 6" at the edges, and no greater than 12" on center on intermediate members.
4. Boards are to be installed horizontally with flap facing downward, so the flap covers the joint of board below. Where detailed cuts are required, utilize a squarely cut panel with the horizontal integral flap if desired to avoid using additional seam tape, thus creating a reverse lap. Any horizontal reverse lap must be sealed with Henry termination sealant.
5. Adjacent rows of Blueskin VP Tech must have the vertical joints off-set from previous rows.
6. Horizontal joints should be sealed prior to vertical joints by removing the release liner on the 2" flap. Care should be taken to avoid wrinkles. All joints must be rolled using a "J" roller.
7. Once horizontal flaps are sealed, the vertical flap should be sealed. Joints must be rolled using a "J" roller.
8. Where a pre-applied flap was not utilized, apply additional joint tape to cover the seam, to a minimum of 3" on each side. Any horizontal reverse lap must be sealed with Henry termination sealant.
9. For outside corners where pre-applied overlay flaps were not utilized apply joint tape to seal corners.

After completion of all steps ensure all flashings are installed around openings and penetrations in compliance with the applicable building code. Install weather resistive exterior cladding materials according to manufacturer's installation instructions.

Optional Installation Methods:

- Panels can be installed vertically if the pre-applied overlay flap faces downward. This will create a reverse lap that must be sealed with Henry termination sealant. (Standard horizontal installation, utilizing the pre-applied overlay flap facing downward, does not require Henry termination sealant since the horizontal overlay flap is continuous from the WRB facer.)
- Panels can be adhered to a tilt-up framed wall section if care is taken to not damage the panel and ensure the fastening pattern and seam sealing requirements are achieved.

4.03 Self-adhered Flashing Installation Procedures

Refer to Blueskin VPtech details for requirements located at henry.com.

Primer (where required)

- Install primer continuously to ensure complete substrate coverage of anticipated flashing installation area.
- Allow primer to cure to a tacky film prior to application of flashing. Refer to relevant product TDS for estimated cure times.

Preparation

- Measure and cut flashing to ensure adequate length to achieve continuous coverage of desired installation.
- Avoid scoring material while rolled up so as to not inadvertently damage underlying material.

Installation

- Peel protective film from flashing and align top of membrane verifying proper positioning prior to complete film removal and flashing placement.
- Press flashing firmly into place by applying hand pressure to the middle of the membrane and working the pressure towards the edges, eliminating wrinkles and air bubbles.
- Install flashings in shingle fashion to eliminate reverse laps.
- Where adhesion enhancements are needed, prime laps ensuring complete coverage of anticipated lap installation. Refer to relevant primer TDS for recommended application rates.
- Lap adjoining edges a minimum of two (2) inches.
- Roll flashing and laps with roller to obtain thorough adhesion.
- Seal end of day and permanently exposed reverse laps in accordance with recommended auxiliary materials.
- Avoid stretching and overextending material at corners or inside angles.

4.04 Liquid-applied Flashing Installation Procedures

Refer to Blueskin VPTEch details for requirements located at henry.com.

Primer

- Apply compatible primer according to application instructions to raw edges of gypsum sheathing to completely encapsulate cut edge of gypsum sheathing.
- Refer to TDS for applicable cure time prior to application of liquid-applied flashing.

Installation

- Install liquid-applied flashing in a serpentine pattern. Minimum width of flashing application may vary.
- Spread flashing to achieve a monolithic membrane over substrate requiring flashing. Refer to TDS for installation rates and recommended thickness.
- Allow liquid-applied flashing to cure prior to subsequent installations.

5. Adjacent Material Attachment and Fastener Penetrations

It is the responsibility of the installing contractor to properly install and inspect fastener installation and associated components that interface with the WRB layer to maintain continuity. Install fasteners and components to produce a seal around the point of penetration by creating a continuous compression thereby maintaining continuity in the WRB.

Fasteners and components unable to create a seal as described in this installation manual must be sealed with Henry termination sealant to fully encapsulate the hole created at the point of WRB penetration.

5.01 Fastener Penetrations Through Blueskin VPTEch

- Fastener head or assembly component must be installed to provide a continuous compression firmly against WRB, creating a gasketing seal without damaging the membrane.
- Do not install fastening components over unsupported areas of the substrate, such as sheathing joints.
- Remove improperly drilled holes, overdriven fasteners, improperly installed fasteners, defective/broken fasteners, fasteners not properly fastened into the building structure, and seal the vacated hole with Henry approved sealant prior to the installation of the exterior cladding.

6. Details

Drawings are available that indicate typical conditions for installing Blueskin VPTEch. Prior to installation, verify unique requirements of local codes, laws, statutes, or regulations that may be applicable for a specific installation. Henry assumes no liability for the accuracy, completeness or appropriateness of the drawings included in this installation manual for a specific installation or purpose. Confirm project specific conditions with a local licensed design professional in order to assure compliance with all legal requirements. Henry is not licensed to provide professional engineering or architectural services.

- A complete selection of Blueskin VPTEch details are located at henry.com.