

## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### HYDROBLOK ONE INSTALLATION GUIDE

In today's construction industry, efficiency, durability, and performance are more important than ever. Traditional sheathing methods, such as OSB combined with house wrap (WRB), are outdated and prone to moisture-related failures, air leakage, and long-term degradation.

HydroBlok One is the next-generation solution that eliminates the need for OSB and WRB, providing a high-performance sheathing system that integrates structural strength, weather resistance, and energy efficiency into a single board.

Designed for both structural and non-structural applications, HydroBlok One simplifies the building envelope by combining:

#### ■ SUPERIOR STRUCTURAL PERFORMANCE

Engineered for high shear values, making it a direct replacement for OSB in shear walls, bracing, and load-bearing applications.

#### ■ INTEGRATED WEATHER BARRIER

Unlike traditional OSB that requires a separate WRB layer, HydroBlok One is waterproof, vapor-resistant, and air-sealed when properly installed.

#### ■ MOISTURE & MOLD RESISTANCE

Will not absorb water, swell, or rot—eliminating the risk of mold growth and delamination that plague wood-based sheathing.

#### ■ LIGHTWEIGHT & EASY TO INSTALL

50% lighter than OSB, reducing labor time and making it easier to handle, cut, and fasten with standard tools.

#### ■ ENERGY EFFICIENCY & AIRTIGHTNESS

Sealed with approved polyurethane sealant, HydroBlok One creates a continuous vapor and air barrier that enhances insulation performance, reduces drafts, and improves overall energy efficiency.

Whether used in residential, multifamily, or commercial construction, HydroBlok One is the ideal solution for builders, architects, and contractors who want a stronger, more durable, and more efficient exterior wall assembly.

This guide provides step-by-step installation instructions for HydroBlok One, ensuring that you maximize its performance in your building projects.

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*This manual is subject to periodic re-examination and revision. For information on the current status of these documents please check the HydroBlok website, [www.hydroblok.com](http://www.hydroblok.com). The reader is responsible for ensuring that they are using the most up-to-date information.*



## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### OVERVIEW

The HydroBlok One board is engineered as the most advanced substrate for exterior cladding finishes. HydroBlok One wall sheathing boards are a composite solution that removes the need for additional building wrap. A rough dry-in is achieved once HydroBlok One flashing tape, with a minimum width of 3-3/4", is correctly applied, and window and door openings are properly flashed.

HydroBlok One sheathing can be used with a range of exterior claddings. Wall coverings that can be used with HydroBlok One sheathing include brick, vinyl, stone, fiber cement, wood (shake, shingle and lap siding), and acrylic/synthetic stucco finishes. Follow all cladding manufacturer's installation instructions.

The HydroBlok One board minimizes material use, shortens cure time, reduces steps to completion, and significantly cuts labor hours.

### TOOLS NEEDED

#### COMMON

- ✓ Impact drill
- ✓ Utility knife
- ✓ Flat trowel
- ✓ Long straightedge or screed tape measure
- ✓ Laser or traditional level
- ✓ Staple gun (if applying WRB)
- ✓ Rubber roller (for mesh/tape)
- ✓ Pneumatic nail gun
- ✓ Framing hammer
- ✓ Air compressor
- ✓ PPE

#### RECOMMENDED

- ✓ Flush nail collars
- ✓ Air line regulators

### STORAGE & HANDLING

- Store flat and dry off the ground with breathable, waterproof cover
  - Elevate from Ground: Store the boards on a flat surface or pallet, elevating them at least 4 inches off the ground. Avoid placing directly on soil.
  - Stack boards flat and secure them to prevent warping or bending. Use spacers between layers to ensure airflow and avoid pressure on the boards.
  - Anchor covers on top of the stack, but keep away from sides and bottom to assure good air circulation.
  - If storing outdoors, cover the boards with a breathable tarp or protective sheeting to shield them from prolonged direct sunlight.
- Outdoors, cover boards loosely with waterproof
- protective material.
- Store the boards away from harsh chemicals, solvents,
- or other materials that could damage the surface or integrity of the sheathing..

### SIZE & SHEAR CAPACITY

#### BOARD SIZE

HydroBlok One boards are available in the following span ratings and performance categories:

#### 16/0, 1/2 PERF CAT

*NOTE: Available in 4x8 lengths in 1/2", 1", and 1 1/2" thickness.*

#### ALLOWABLE SHEAR CAPACITIES

Visit <https://icc-es.org/report-listing/ESR-5685/> for current allowable shear capacities.

## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### APPROVED PRODUCTS

#### APPROVED FASTENERS

HydroBlok One sheathing must be installed with code-approved fasteners. Fasteners used to install HydroBlok sheathing boards are not required to be ring-shank, galvanized, or stainless steel unless otherwise stated by the local building code or designer of record.

#### APPROVED SEALANT TAPE

Minimum 3-3/4" wide approved flashing tape must be used where two HydroBlok One boards come together to create a board joint at inside corners, outside corners and in the same plane; however, other code approved flashing tapes that satisfy AAMA-711 or AC-148 can be used to flash rough openings, penetrations, and fenestrations.

#### APPROVED BASE COATS FOR SEAMS

Master Wall  
Sto Base + Primer  
Senergy  
Dryvit

#### APPROVED FINISHES

Master Wall  
Senergy Acrylic Finishes

#### APPROVED POLYURETHANE FOAM SEALANTS & ADHESIVES

HydroBlok Joint Sealant  
Sika Boom Window and Door  
Sto Turbo Stick

#### APPROVED ADHESIVES

Loctite® PL Premium® Polyurethane Construction Adhesive  
AdvanTek™ Polyurethane Foam Adhesive

#### APPROVED FLASHING TAPE

DuPont™ FlexWrap® NF  
3M™ All Weather Flashing Tape 8067  
SIGA Fentrim® F 230  
Blueskin® Butyl Flash

#### APPROVED WRB AND DRAINAGE PLANE

Tyvek™ Stucco Wrap  
Tyvek™ House Wrap  
Bituminous Wraps (tar or roofing paper)

### NOTES & LIMITATIONS

- **R-value of 1/2" HydroBlok One = R 1.8**  
**R-value of 1" HydroBlok One = R 3.6**  
**R-value of 1.5" HydroBlok One = R 5.4**
  - At ground level, the exposed bottoms of boards must be finished with accessories, caps, bug guards, or drainage systems for effective water management. Local building codes should be checked before installation.
  - HydroBlok One may be installed over existing sheathing/stucco as long as the substrate is structurally sound and clean. Additional fasteners or adhesives may be required.
  - When installing HydroBlok sheathing boards, conditions should be dry with temperatures between 40°F and 90°F. Avoid high humidity or rain during installation.
  - White residue appearing after boards get wet is normal and does not impact performance. This efflorescence can be wiped off before stucco application, or stucco can usually be applied directly over it.
  - All boards must be covered with finish within **180 days**.
  - Primer is not recommended before applying the finish coat. In fact, primers may contain solvents that lead to delamination of HydroBlok boards.
  - The base coat should cure for 24 hours (or longer in cold/humid conditions) before the finish coat is applied.
  - Stucco should not be applied directly to exposed foam; an approved base coat must be applied first to prepare the surface.
  - Once the stucco finish has fully cured, exterior-grade breathable paint compatible with stucco can be used.
  - Finished exterior cladding products should be installed per the manufacturer's installation instructions.
- Veneer cladding should not exceed **20 lbs per square foot** unless structurally approved.

## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### FASTENING

The type of fastener and spacing depends on whether HydroBlok ONE is being used in a structural or non-structural application.

Fasten the boards to the framing members with code approved fasteners. Space fasteners 6" o.c. along supported edges and 12" o.c. at intermediate supports, unless otherwise specified by local code or the designer of record. It's the responsibility of the general contractor to verify proper fastener type and spacing prior to installation. Apply fasteners a minimum 3/8" from board edges.

See Table 1

### FASTENING GUIDE NOTES

- Structural applications require tabbed washers to increase shear performance and hold the board securely in place.
- Do not overdrive screws; washers should sit flush with the surface.






Assembly Type	Screw Type	Picture	Screw Length Needed Based on Board Thickness			Spacing Requirement
			½"	1"	1½"	
HB One Boards to Wood Sheathing (Non-Structural)	7/16 Medium Crown Staples		1½"	2"	NA	12 inches in field, 6" on perimeter
HB One Boards to Wood Sheathing (Non-Structural)	Standard Roofing Nails		1¾"	1¾"	NA	12 inches in field, 6" on perimeter
HB One Boards direct to wood studs (Structural)	HydroBlok or Standard Exterior Grade Screws		1⅝"	2"	2½"	12 inches in field, 6" on perimeter
HB One Boards direct to metal studs (Structural)	Self-Drilling Pan Head Screws HB 1¼" Tabbed Washers		1½"	2"	2½"	12 inches in field, 6" on perimeter
HB One Boards direct to CMU (Structural)	Bugle Head TapCon/Concrete Screws + HB 1¼" Tabbed Washers		1¼"	1¾"	2¾"	16" on center

Table 1

## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### STUCCO INSTALLATION INSTRUCTIONS

#### ■ STEP 1

Apply house wrap to existing sheathing per manufacturer's instructions.

*NOTE: If using HydroBlok ONE Structural Sheathing instead of traditional wood sheathing, please follow instructions found on our website: [www.hydroblok.com](http://www.hydroblok.com)*

#### ■ STEP 2

(Optional) If a drainage plane is required, we recommend a WRB/Drainage product such as stucco wrap or equivalent. Install according to the manufacturer's instructions.

#### ■ STEP 3

Secure the first board in place using the Fastener Guide for sizes and locations just inside the outside edge ensuring the head is fully within periphery of wall board by at least 1/8" and engaging fully with the stud. Space fasteners according to the Fastener Guide.

#### ■ STEP 4

Attach the next board flush with the adjoining board and repeat steps 1-3.

#### ■ STEP 5

Stagger board seams a minimum of 24" apart.

#### ■ STEP 6

It is recommended to install weep screed drainage at bottom of wall. Check your local codes for specific requirements.

#### ■ STEP 7

Seal all window and door openings between HydroBlok boards with approved expanding polyurethane foam.

#### ■ STEP 8

Apply approved alkali-resistant 4" fiberglass mesh tape to seams by sticking mesh directly to any open seams between boards.

### STUCCO INSTRUCTIONS CONT'D

#### ■ STEP 9

Apply base coat directly over mesh tape and feather seams using a flat trowel at least 6" per side to prep for finish coat. Float seams after 10-15 minutes if needed for a smoother finish.

#### ■ STEP 10

Apply base coat to any exposed foam at termination points (corners).

#### ■ STEP 11

Install corner aids to all outside corners. See detail below.

#### ■ STEP 12

Cover screws and washers with approved base coat ensuring they are flush with the surface of the board.

#### ■ STEP 13

Allow 24 hours (or manufacturer's recommended dry/cure time) for base coat to dry.

#### ■ STEP 14

Apply finish coat directly to HydroBlok sheathing.



## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### CORNER AID INSTALLATION

Corner aids are used to reinforce and protect exterior and interior corners of a stucco system. They help maintain sharp, straight edges and prevent damage from impact or wear over time. Corner aids are particularly important in high-traffic areas, building exteriors, and locations where mechanical damage is likely.

#### PREPARATION

Ensure outside corners are clean and free of debris. If needed, apply approved base coat or equivalent to exposed foam before installing the corner aid.

#### INSTALLATION

- **STEP 1**  
Cut the corner aid to length
- **STEP 2**  
Apply a thin approved base coat (about 3") to edges of both corners, enough to embed the corner mesh and hold the corner aid in place.
- **STEP 3**  
Press the corner aid firmly into place and apply another layer of approved base coat with a trowel pushing down to ensure full contact with the board.
- **STEP 4**  
Feather out approved base coat at least 6 inches per side for a smooth finish.
- **STEP 5**  
Allow the base coat to dry according to the manufacturers recommendations before applying acrylic/synthetic finish coat (usually 24 hours).

### EXPANSION JOINTS INSTALLATION

Expansion joints are necessary to accommodate structural movement caused by temperature fluctuations, material expansion/contraction, and settling. Without them, stucco can develop cracks over time.

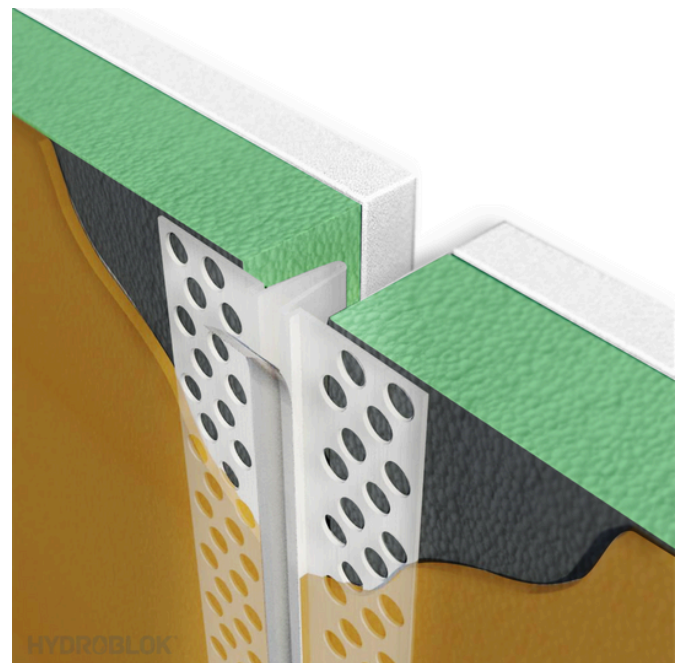
Although HydroBlok boards are extremely dimensionally stable expansion joints may still be required due to design requirements. Expansion joints should be placed **approximately every 144 sq.ft.** to ensure flexibility and reduce potential for cracking.

### EXPANSION JOINTS INSTALLATION CONT'D

HydroBlok recommends surface mount expansion joints for ease of installation.

#### INSTALLATION

- **STEP 1**  
Mark the locations of the joints based on the desired layout.
- **STEP 2**  
Install boards according to the instructions above ensuring proper spacing between boards to accept expansion joint channel.
- **STEP 3**  
Apply approved base coat or equivalent to embed the trim into the surface, ensuring smooth integration with the surrounding stucco.
- **STEP 4**  
Feather the base coat at least 6 inches on each side.
- **STEP 5**  
Once the base coat is dry, apply the desired final stucco finish.





## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### REVEAL LINES INSTALLATION

Reveal lines are architectural design elements that create visual breaks in the stucco finish such as between building façade materials or at fenestration openings. They can be used to mimic panelized construction, add texture, or highlight certain sections of a wall.

Reveal lines can also help control cracking by allowing some degree of movement while maintaining a clean and modern appearance.

HydroBlok recommends surface mount reveals for ease of installation.

#### INSTALLATION

##### ■ STEP 1

Mark the locations of the reveal lines based on the desired layout.

##### ■ STEP 2

Install HydroBlok One sheathing according to the instructions above ensuring proper spacing between boards to accept reveal channel.

##### ■ STEP 3

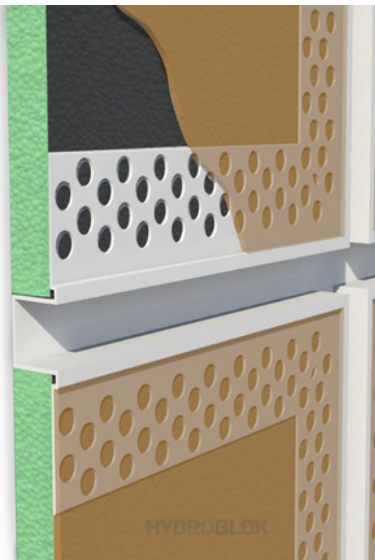
Apply approved base coat to embed the trim into the surface, ensuring smooth integration with the surrounding stucco.

##### ■ STEP 4

Feather the base coat at least 6 inches on each side.

##### ■ STEP 5

Once the base coat is dry, apply the desired final stucco finish.



### THIN BRICK & OTHER VENEERS

HydroBlok One sheathing boards can support thin brick, natural stone, manufactured stone, and other adhered veneers, provided proper drainage and installation methods are followed.

When installing veneers over HydroBlok One sheathing boards, the following guidelines must be met to ensure structural integrity, moisture management, and long-term performance.

#### ■ DRAINAGE AND MOISTURE MANAGEMENT

Follow the same guidelines for installation of approved drainage plane.

#### ■ ATTACHMENT AND BONDING

Veneers must be installed using an approved polymer-modified mortar or adhesive, applied per ANSI A118.4 or A118.15 standards.

For thin brick and stone veneers, a minimum bond coat thickness of 1/4 inch **is** recommended to achieve proper adhesion.

Always follow the manufacturer's instructions.

Most polymer-modified mortars are compatible with HydroBlok One. If you have any questions please contact our technical support team.

#### ■ EXPANSION JOINTS AND STRUCTURAL CONSIDERATIONS

Expansion joints should be incorporated at standard industry intervals to allow for structural movement and prevent cracking. Reference above for stucco installation.

**Veneer weight limits must not exceed 20 lbs per square foot unless approved by an engineer.**



## SHEATHING WITH EXTERIOR CLADDING INSTALLATION GUIDE

### BRICK

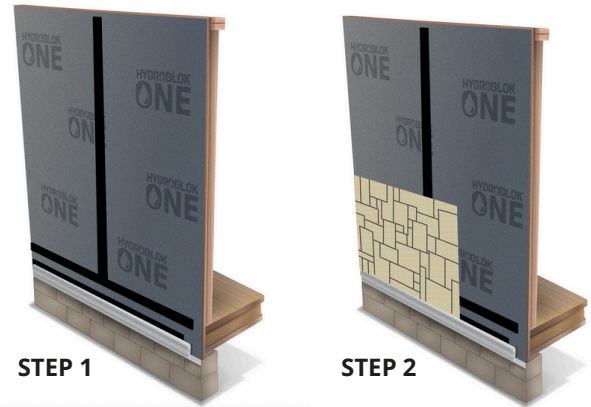
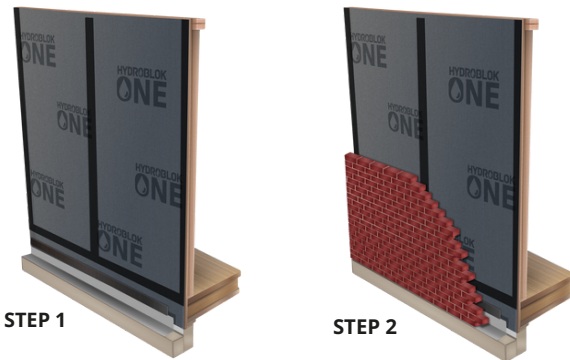
#### ■ STEP 1

After all HydroBlok One sheathing board seams have been taped (if required), tape the top edge of the masonry flashing back to the HydroBlok One sheathing. Install brick ties in accordance with local building code and the brick tie manufacturer's written instructions.

*NOTE: Taping is only necessary when HydroBlok One is installed directly over framing and used as part of the water-resistive barrier (WRB) system. Install brick ties in accordance with local building code and the brick tie manufacturer's written instructions.*

#### ■ STEP 2

Install brick veneer with a minimum 1-inch air space per the local building code.



### LAP SIDING

The HydroBlok One sheathing boards can provide an insulative, waterproof substrate for vinyl, metal, wood, and fiber cement siding products when installed as per HydroBlok Sheathing installation instructions. Nailing into the framing member or furring strip is required.

Follow manufacturers guidelines for installing siding over continuous insulation or non-nailable substrates.

#### ■ STEP 1

After all HydroBlok One sheathing board seams have been taped, tape the top edge of any flashing back to the surface of HydroBlok One sheathing.

#### ■ STEP 2

Install lapped siding in accordance with siding manufacturer's written instructions. Fastening to be determined by the cladding manufacturer.



### VENEERED STONE

#### ■ STEP 1

After all HydroBlok One sheathing board seams have been taped, tape the top edge of the drip edge/weep screed flashing back to the HydroBlok One sheathing.

#### ■ STEP 2

Install stone in accordance with manufacturer's installation guide, building code or third-party guidance's written instructions. Veneer cladding should not exceed 20 lbs per square foot unless structurally approved.