ThermalBuck™ Product Specifications

THERMAL BUCK™

PRODUCT DESCRIPTION

ThermalBuck is a high-performance ROESE, Rough Opening Extension Support Element. Commonly known as a "window buck", ThermalBuck is designed to extend the mounting point of windows and doors to meet the exterior insulation and/or rain-screen plane. It's unique "L" shape transfers the load of the window or door to the structure, and supports the weight of the window. ThermalBuck is the high-performance window buck.

PRODUCT USE

ThermalBuck is part of a continuous insulation solution for high-performance building envelopes. It was developed for use in structures utilizing exterior insulation and/or rainscreens. Thermal-Buck extends and insulates the mounting points of windows and doors to create a flush plane for cladding attachment. It allows for structural attachment of the window or door, and prevents the compression of exterior insulation. It insulates, and acts as a flashing agent at the rough opening, creating an additional air and water barrier. ThermalBuck limits thermal bridging at the rough opening, and prevents condensation around windows and doors. Thermal-Buck is covered completely with exterior cladding and trim.

PRODUCT COMPONENTS

COATING

The outer coating of ThermalBuck is a polyurethane/polyurea hybrid. It provides water resistance, strength, and durability. t helps ThermalBuck to act as a water and air barrier at the mounting point of windows & doors. Tensile strength 3,100 psi. Tear strength 360 psi. Durable enough for nail gun installation.

CORE

ThermalBuck's core is a Type XIV high density EPS (Expanded Polystyrene) that combines the strength and durability of EPS with the natural water resistant properties of wax to provide a lasting water and thermal barrier. It contains termiticide, to protect against pests. The density of the EPS 3 pcf, with a compressive strength of 40 psi. When coupled with the outer coating in a range of 25 to 40 mils, the compressive strength of a finished piece of Thermal-Buck is 52 psi. Shear strength is 70 pli.

ThermalBuck does not contain vinyl or phthalates, CFC's, HFCs, or HCFCs, only air in the insulating cells. It does not contain ozone depleting gasses, or emit VOC's. Lightweight, it saves CO_2 emissions in transit.

PRODUCT DIMENSIONS & AVAILABLE SIZES

ThermalBuck is available in 8′ lengths, with 7 different depths to choose from. The width of the portion that extends past the rough opening to the exterior of the structure, is matched to the thickness of the exterior insulation and/or rainscreen, and available in seven sizes: 1.0″, 1.5″, 2.0″, 2.5″, 3.0″, 3.5″ and 4.0″.

Product Name: ThermalBuck™

Manufacturer: **BRINC Building Products, Inc.**

Distributor: **Thermal Building Supply**

Phone: **(617) 331 - 4647**

Website: **thermalbuildingsupply.com**

FMA/AAMA/WDMA STANDARD 500-16

For installation guidance, please refer to the following document, FMA/AAMA/WDMA 500-16 Standard Practice for the Installation of Mounting Flange Windows into Walls Utilizing Foam Plastic Insulation (FPIS) with a Separate Water-Resistive Barrier (WRB).

The term ROESE, **Rough Opening Extension Support Element** was developed by the FMA, AAMA & WDMA.

A ROESE is defined as a projection (bump-out) or extension to the structural wall framing at the rough opening perimeter.

The tongue, or portion that lays right inside of the rough opening, is consistently 2.5″ in length and a thickness of 1/2″ for all sizes of ThermalBuck. The integrated sill pan features a 1/16″ slope from a depth of 1-3/4″ (from the exterior edge of the tongue). The jamb pieces of ThermalBuck act as an end dam. The back dam is created when the interior is sealed.

PRODUCT INSTALLATION

ThermalBuck is sold in 8´ lengths. It is lightweight, easy to handle, and cut to fit rough openings on-site with a miter saw. In order to qualify as a flashing agent, we recommend installation of ThermalBuck only with approved sealants, such as DAP Dynaflex 800 all-weather sealant. The underside of each piece is coated with 3 beads of sealant, pressed firmly into the rough opening, and secured with 2″ galvanized roofing nails through the 1/2″ tongue every 10″ - 12″ (minimum 1-1/4″ penetration into structure). ThermalBuck seams are sealed with recommended sealant, clamped, and should cure for 24 hours. The nail flange window is attached according to the window manufacturers' recommendations, directly through the ThermalBuck into the structure with nails or screws (minimum 1-1/4″ penetration). Screws are preferred for window attachment, and should be installed at an angle. Flashing tape is not needed inside the rough opening. The transition of ThermalBuck and the sheathing is sealed, as well as the interior transitions to the window, and framing. The interior sill is finished with any scrap material on hand. If shims are needed, preferred placement on the interior between jack stud and sill. If placed on ThermalBuck at the sill, 1″ sq shim for every 40 lbs of window weight.

NOTE: Rough openings must be oversized 1/2″ on all 4 sides to accommodate the 1/2″ tongue of ThermalBuck. Split pieces of ThermalBuck may be used on the jambs. Whole pieces are preferred at the head and sill, unless RO is larger than 8´.

Download detailed installation instructions at **thermalbuildingsupply.com**

FEATURES AND BENEFITS

- **Extends** the **mounting point** of **windows & doors** to meet the exterior insulation and/or rainscreen plane.
- Acts as a **flashing agent**, creates a complete **water & air barrier** when mounted with recommended sealants.
- **Insulates** the mounting point of windows & doors 4x more than wood window bucks.
- **Limits thermal bridging**, with an R-value range of 4.4 to 17.6.
- **Prevents condensation**, reduced thermal bridging means less moisture, mold and mildew.
- **Handles shear** and **wind loads** up to **70 lbs** per linear inch.
- **Sustains hurricane force winds** with minimal permanent compression (compressive strength of 52 psi).
- Allows **structural attachment** of windows & doors (must penetrate structure min. 1-1/4″).
- 1/16″ **integrated sill pan** for good drainage.
- **Dimensionally stable** and **elastic**. ThermalBuck won't warp, shrink, or expand like wood window bucks.
- **Energy-efficient**, reduces the amount of natural resources needed to heat and cool year-round.
- **Improves Indoor Air Quality** by preventing condensation.
- Helps maintain the **long-term operating ease** of windows & doors.
- **Lightweight**, **flexible, durable** and **strong**, ThermalBuck is easy to work with and install with one person.
- **Simplifies** the **installation** of **windows & doors**.
- ThermalBuck outperforms wood window bucks, and is easier to flash properly, window after window.

MAINTENANCE AND STORAGE

No maintenance is required. Changes to color and sheen may occur within 3 month span of full UV exposure. No loss of physical properties should occur for 1 year or more. Cover with cladding and trim.

THERMAL
BUILDING SUPPLY

Updated November 2018

ThermalBuck™ Technical Specifications

THERMAL BUCK™
HIGH-PERFORMANCE ROESE

ThermalBuck High-Performance ROESE
Rough Opening Extension Support Element

ThermalBuck both extends and insulates the mounting points of windows & doors to meet the continuous insulation and/or rainscreen plane. It limits thermal bridging in the building envelope, and creates a flush plane for cladding attachment.

Technical Data: Applicable Standards & Corresponding Physical Properties

PROPERTY	ASTM TESTING	VALUE	TEST METHOD
Compressive Strength	@10% deformation	52.4 psi	ASTM C165
Design Pressure	+203.01 psf	<0.5 mm (0.02″)	ASTM E330/E330M
Design Pressure	-203.01 psf	<0.8 mm (0.03″)	ASTM E330/E330M
Structural Pressure	±300.76 psf	<0.3 mm (<0.01″)	ASTM E330/E330M
Water Penetration	9.19 psf	PASS	ASTM E547
Air Infiltration	1.57 psf	<0.01 cfm/ft²	ASTM E283
Air Infiltration	6.24 psf	<0.01 cfm/ft²	ASTM E283
Burn Test	Class A or 1 Fire Rating	FS<25, SD<450	ASTM E84
Composition	Type XIV EPS with polyurethane/polyurea resin coating - contains termiticide		

Technical Data: R-Value

ESR-3753 THERMAL INSULATION
2009, 2012, 2015 & 2018 Energy Code Compliance

ThermalBuck	1.0″	1.5″	2.0″	2.5″	3.0″	3.5″	4.0″
R-Value @75°F	4.4	6.6	8.8	11	13.2	15.4	17.6
R-Value @40°F	4.8	7.2	9.6	12	14.4	16.8	19.2
R-Value @25°F	5.0	7.5	10	12.5	15	17.5	20

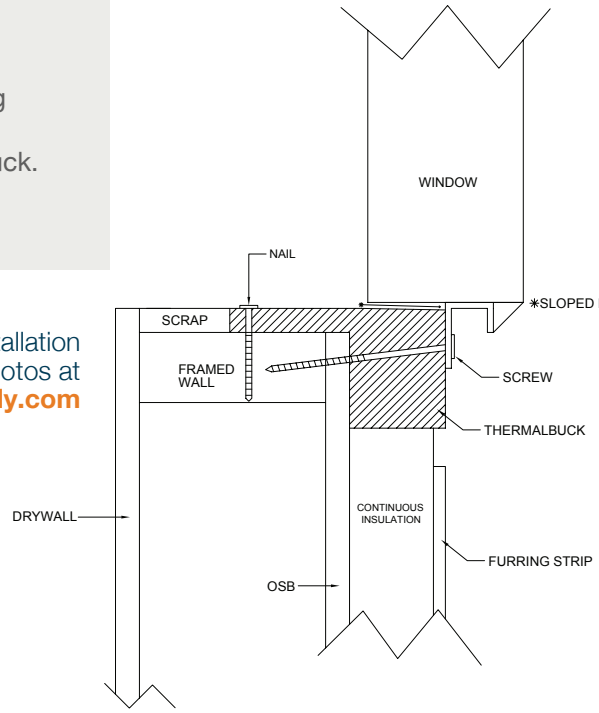
Rough Opening Preparation & Product Dimensions

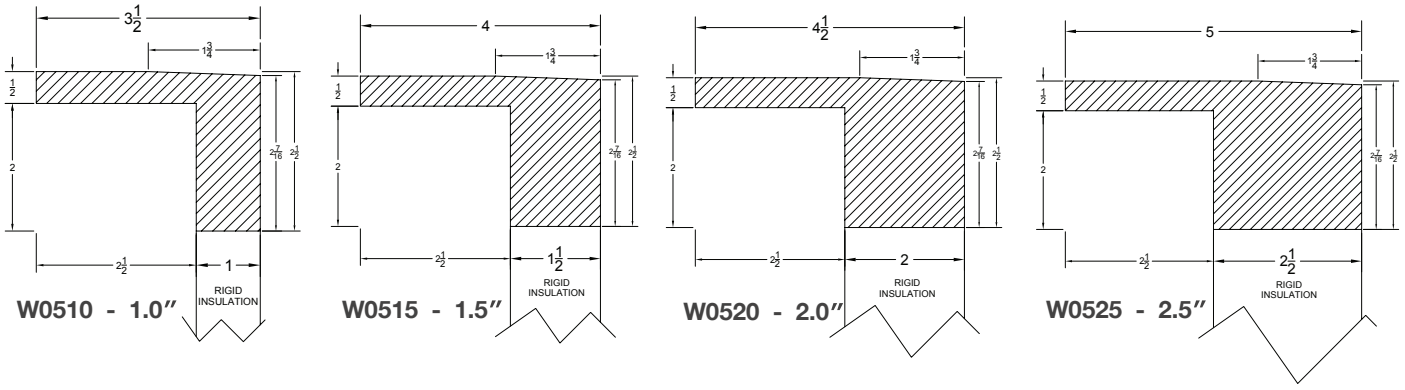
Note:

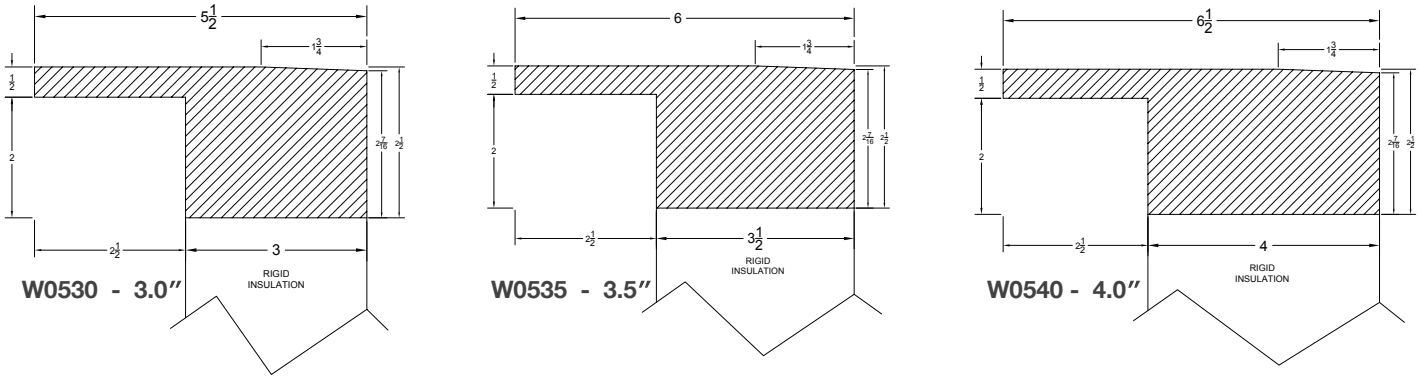
- Allow 1/2″ additional room on all sides of the rough opening (1″ overall) than recommended by window manufacturers' instructions to accommodate the 1/2″ tongue of ThermalBuck.
- Consider continuous insulation and/or rainscreen depth.

ThermalBuck features an integrated sill pan with a slope of 1/16″ on all 8′ lengths.

Download detailed installation instructions with photos at **thermalbuildingsupply.com**







Note:

For additional information please refer to following document, FMA/AAMA/WDMA 500-16 Standard Practice for the Installation of Mounting Flange Windows into Walls Utilizing Foam Plastic Insulation (FPIS) with a Separate Water-Resistive Barrier (WRB).

Materials Needed for Installation

- DAP Dynaflex 800* or recommended sealant & Sealant Gun
- 2″ Galvanized Roofing Nails for ThermalBuck
- #10 Nails or Screws for flange (penetrate 1-1/4″ into structure)
- Flashing Tape to cover window nail flange & J-Roller
- Miter Saw

*DAP 3.0 in Canada