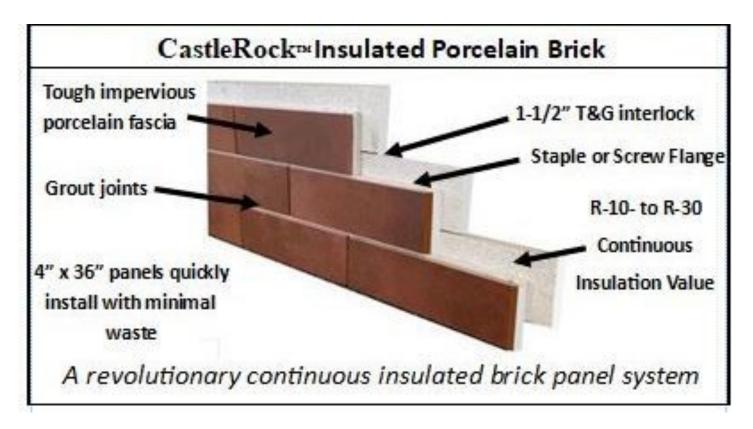
CastleRock Porcelain Brick & Porcelain Panel



ICAP Laboratory Testing Information

ICAP-USATM Cladding – Patented in US #8,176,701 B2 & Canada 2,588,294. Test reports and certifications are listed below: ICAP is a division of CastleRock Building Products, Inc.

Intertek/Warnock Hersey Test Reports W/N 20269
Intertek test reports available at www.spec-direct.com
Installation Guides available at www.lCAP-USA.com
Or by contacting us at icap.sales@gmail.com



LISTED



Testing conducted in accordance with the following:

Evaluation Guide: ICC EG 315

ASTM E330(2002): "Standard Test Method for Structural Performance for Exterior Windows, Doors, Skylights and Curtain Walls by Static Air Pressure Difference"

ASTM E84(2009) -08a "Standard Test Method for Surface Burning Characteristics of Building Materials" CAN/ULC S102 (2007) "Standard Test Method for Surface Burning Characteristics of Building Materials" ASTM C578 "Standard Test Methods for EPS Foam"

ASTM C1008 Standard Specification For Thin Brick Veneer Made From Clay or Shale.

ASTM 1405 Standard Specification for Glazed Brick (Single Fired Brick Units).

Summary

ASTM E84, CAN/ULC S102 (2007)

Flames Spread Rating: 0 Smoke Generation Rating: 0

ASTM E330(2002) "Standard Test Method for Structural Performance of Exterior Windows, Doors,

Skylights and Curtain Walls by Static Air Pressure Difference"

Ultimate Load: 127 PSF

Workmanship

This Installation Guide assumes the construction personnel have knowledge of the materials described and their proper methods of installation. The manufacturer recommends certified installers be used to install ICAP products. Installer certification is available through the ICAP-USA "Factory Certified Installer" program. Contact us at 208-895-8557 for details.

Preparation

Prior to commencing activity related to the scope of this Guide, review all adjacent products and other subcontractor work that precedes the installation of ICAP-USA cladding ensure proper workmanship is reflected and that there are no recognizable errors or deficiencies.

Building Code Requirements

Building code requirements vary from area to area. Check with local authorities for building code requirements for your area and application. Carefully read all sections of this guide and follow the manufactures Installation Instructions before proceeding with your ICAP application. In the event the local building codes conflict with other statements made in this document, contact the manufacture for additional guidance.

Material Requirements:

Flashing

All flashing and flashing accessories must be corrosion resistant materials and integrated with the WRB materials or flashings recommended by the air/water resistant barrier manufacturer for use with their products. Flashing must be installed at all through the wall penetrations and at terminations of ICAP panel system, around doors, windows and other protrusions in accordance with local building codes.

Weep Screed

Some jurisdictions require weep screeds or termite barriers. These must be made of corrosion resistant metal a minimum of .019 inches or 26 gage thickness.

Walls and Wall Systems

ICAP-USA ICAP Substrate Panels are designed to attach to the following wall substrates with manufacturer approved fasteners. See table on the next page to determine the appropriate fastener for your application.

Recommended Clearances:

- ICAP Substrate Panels individually attach to the wall or studs and do not require a brick ledge support like masonry products.
- Check with your local building official for requirements above grade and concrete/paving in your area.
 (slope away from the structure in accordance with local building requirements)
- ICAP-USA™ is a cladding product and all components used in its manufacture are waterproof. Consult with your local building official regarding requirements in your area.

Cautions:

- Do not subject ICAP-USA™ Claddings to frequent water contact such as sprinklers or direct spray. Place downspouts or drainage pipes so the water is not frequently contact the cladding.
- Do no subject ICAP-USA™ to contact with de-icing materials, salt, asphalt roofing material or its drainage, or other harsh chemicals. Prolonged exposure may damage the fascia or panel.
- Do not expose the EPS foam portion of the panel to extended periods of sunlight. All surfaces for EPS must be covered with fascia, flashing, other materials to protect it from UV exposure.

ICAP offers fasteners and clips for various materials, R-value cladding and uses. Please review the table below to select the correct

NFPA	Substrate Application	ICAP Panel Fastener	Size	Spacing
Under	Plywood/OSB	Staples	ICAP Part# STA-102	3" or less O.C.
40			1" crown x 2-1/2" Leg	
Under	Plywood/OSB	Screws & ICAP Washer:	ICAP Part# SCW-103	To Studs 16" O.C. Max.
40		Washer: 1-1/4" x .060		& 4" O.C. to sheathing
feet		plated fender washer		
		Screw: #10x3" Zinc Plat-		
		ed or Stainless T-25		
		Drive, Coarse Auger		
		Thread, Type 17 Point		
	Metal Studs with 1/2"	ICAP Screw and washer	ICAP Part# SCW-3	To Studs 16" O.C.
	MgO Cladding or	Washer: 1-1/4" x .060		Max. & 4" O.C. to
	equivalent	plated fender washer		sheathing
		Screw: #10x3" Zinc Plat-		
		ed T-25 Drive, Coarse Au-		
		ger Thread, Type 17 Point		

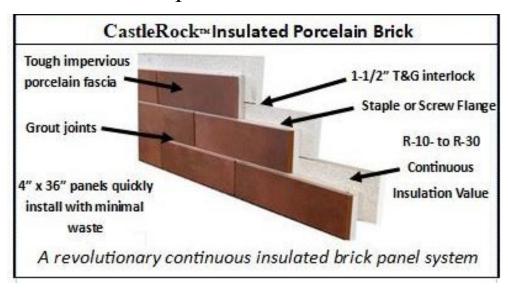
Wind Load Testing

Model#	<u>Evaluation</u>	<u>Ultimate Load</u>	<u>Comments</u>	<u>Fasteners</u>	<u>Maximum</u>
	<u>Property</u>	PA (PSF)			<u>Panel Size</u>
ICAP-88	Uniform Load	88	R-8 to R-19 Panel	Screws to studs	24" x 120"
				16" OC	
ICAP-106	Uniform Load	106	R-8 to R-19 Panel	Screws to studs	24" x 120"
				16" OC	
ICAP-127	Uniform Load	127	R-8 to R-19 Panel	Staples	24" x 120"
				1" crown 3" OC	
				to OSB or Ply-	
				wood	
ICAP-200	Uniform Load	95.60 (200.0)	R-8 to R-19 Panel	Screws to Studs	8-1/2" x 120"
R-08				& 4" OC	
Panel					

C-Series (non-NFPA 285) System

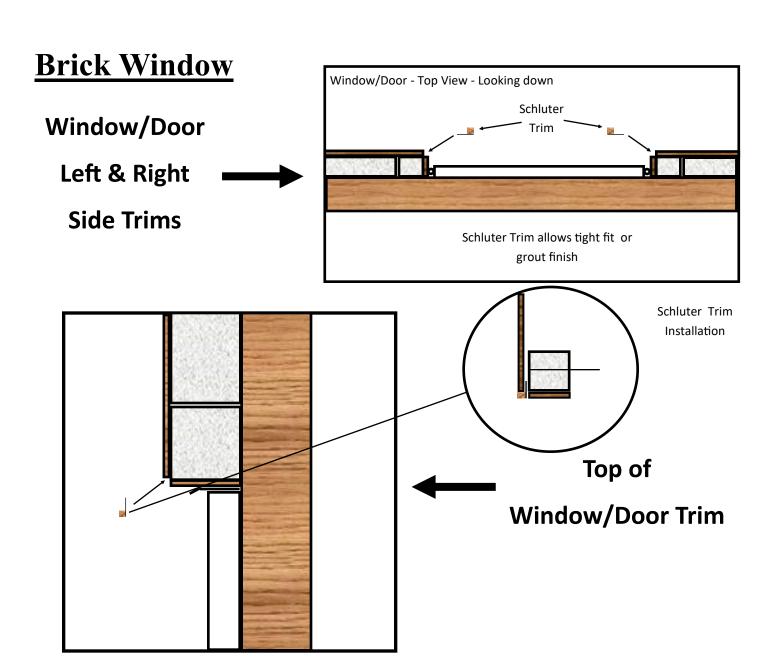
Std. Flat Panel

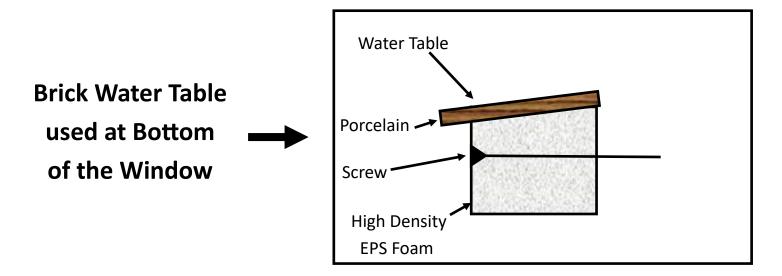
Bricks are 4" high and 12" wide. Each panel contains 3-bricks and covers 1 square foot.



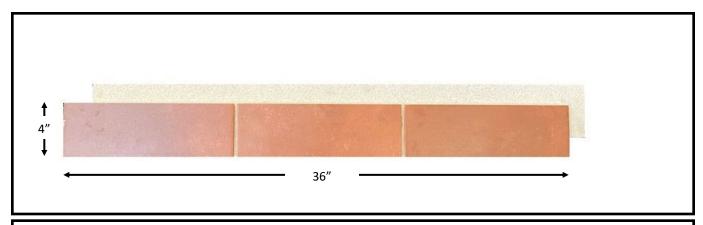
Corners:

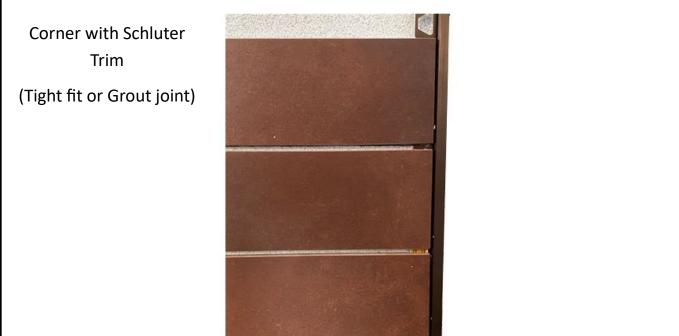
Corners are consist of standard flat panels joined by Schluter prefinished aluminum corner extrusion.





ICAP Insulated Porcelain Lap Siding Panels







Fasteners



Wood Studs: Standard ICAP Screw/Washer Assembly: #10 x 4"
Zinc Plated or Stainless Steel— #2 square Drive, Course Auger
Thread, Type 17 Point. Used to attach EPS Foam Panels to wood
Studs.and OSB 8" O.C. (Non-NFPA 285) (Gold Colored Screw)

1-1/4" Fender Washer: Used on tongue flanged to attach to wood or metal studs and on 8" centers.



1" Crown by 2-1/2" Staple: Used on 7/16" OSB plywood or equivalent. 3" centers.



SS0002

#9 min. x 2" Zinc Plated or Stainless Steel—T-25 Torque Drive, Course Auger Thread, Type 17 Point. Used to attach Starter Strip.

SS0048

Starter Strip: 48" long section of the starter strip used at the bottom of the wall to receive the groove flange of first row of panels.

Tools Required

Sheathing	Tool	Fasteners
OSB or Plywood	ICAP Staples Gun	1" x 2-12" Staples
Studs (wood or metal)	Screw Gun & Drivers	See Screws above
All Sheathing	Sliding Miter or Masonry Saw	
Misc. Cuts	Right Angle Grinder –diamond Blade	
Construction Tools	Scaffolding, Ladders, Hand Tools	
Masonry Tools	Grout Gun or Bag, Trowel, Striker, Etc.	
Hot Knife Foam Cutter	ICAP Grooving Blades	

GFRC Part Numbers

Part #	<u>Description</u>
GFR-CST	GFRC Water Table Standard Straight Section
GFR-CLH	GFRC Left Hand Water table termination
GFR-CRH	GFRC Right Hand Water table termination
GFR-CSL	GFRC Sill for under window
GFR-CWS	GFRC Window Trim Sections (Standard 30" or can be ordered in modular size to fit window).
GFR-C90	GFRC Window 90 degree corner (Fits both left and right ends)
GFR-CPS	GFRC Parapet Standard Sections
GFR-CPC	GFRC Parapet Corner Sections cut at 45 degrees

GFRC Trim components should be laid out and field cut to fit in symmetrical pattern to prevent small pieces and cosmetic appearance:

Water Table:

- 1. Standard Flat sections (30")
- 2. Window/door terminations L-hand and R-hand (30")

Lay out the sections to determine the best symmetrical appearance of the components. Typical adjustment is to cut the Left and Right Window Termination pieces unless it makes the to small and detracts from the symmetrical design of the building.

Window Trim:

Window Trim standard sections can be ordered to a common modular size for the most common window size to reduce cutting and fitting. Pre-determine when ordering.

Window Sill:

Standard size is 30". Field cut to fit in symmetrical pattern to prevent small pieces.

Parapet:

Parapet is available in Standard 30" pieces & pre-cut 90 degree corners.

ICAP GFRC Modular Trim System

The ICAP GFRC System consists of 7 components listed below. They are designed to provide a transition from ICAP Brick or Stone Panels to the ICAP Porcelain System.

Water table Components consist of standard-length sections, left-hand & right-hand window/door termination components.

The Sill consists of single-length components and are cut to symmetrical lengths for the window width.

The Window Trim consists of straight components & Right-angle corner units. The straight sections can be ordered in custom modular lengths to fit the top of the most common windows and are field cut to symmetrical lengths to fit the window sides above & below the Water table.

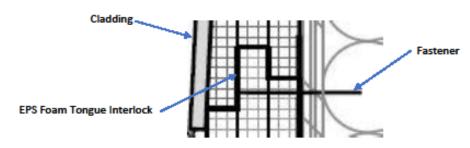
All components attach to the structure with the following fasteners. ICAP Staples can be used to attach to OSB or plywood sheathing a minimum of 7/16" thickness. ICAP Screw-washer assemblies can be used to attach to wood or concrete masonry units (CMU).

Substrate:	Fastener	Spacing	
OSB or Plywood Sheathing 7/16" min.	Staples – 16-gauge minimum corrosion resistant, 1" crown by 2-1/2" leg	3" on center & minimum of 2 staples per piece if small pieces.	
OSB or Plywood Sheathing 7/16" min.	Screw/washer Assembly – #10 by 2-1/2" corrosion resistant, torque drive deck screw.	8" on center & minimum of 2 screws per piece if small pieces.	
Concrete Masonry Units (CMU)	Screw/washer Assembly – #10 by 2-1/2" corrosion resistant, torque drive concrete screw.	8" on center & minimum of 2 screws per piece if small pieces.	

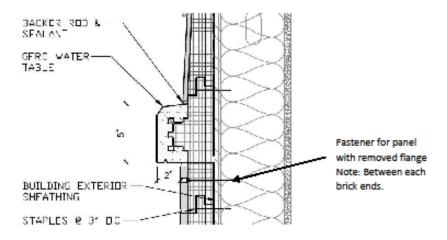
ICAP GFRC COMPONENTS	
Water Table Standard Section (30" or custom)	Std. Section Foam Notched to Fit Window Termination
Water Table – Window Trim Juncture Note: Foam tongue on Water table with require filed trim to fit on top juncture.	
Sill – Window Trim Juncture Note: Window Trim will require field cut to fit.	Field notched to fit
Window Trim Corner -	

ICAP Attachment System

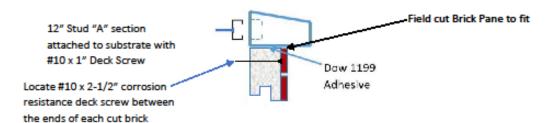
Standard Panel Fastening



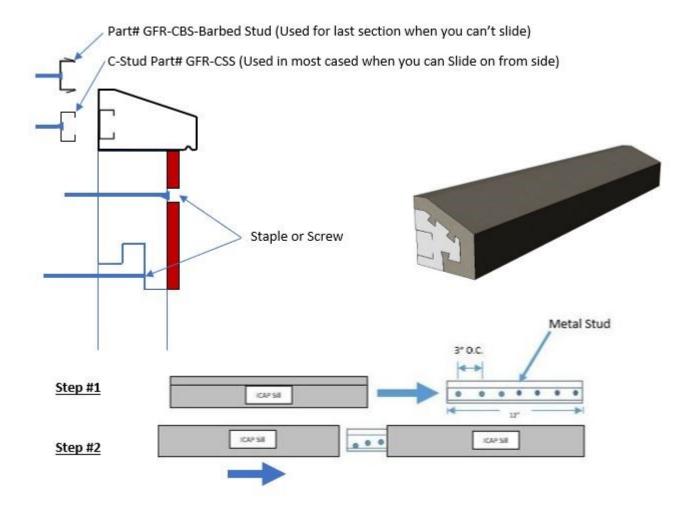
Securing Cut Panel at Sill



Mechanical Attachment with Metal Stud

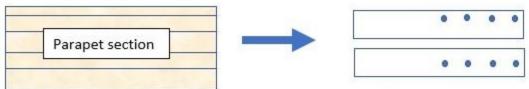


Windowsill Installation



ICAP-USA Parapet Installation Instructions:

- 1. Install a weather resistive barrier (WRB) & flashings as specified or required by local codes.
- 2. Cut top of ICAP panel to level with the bottom of parapet cap.
- 3. Determine the starting point (Right shown) and attach 2 pieces of Stud "A" (see drawing below) 12" long to the wall installing screws on 3" center as shown (size: #8 x 1" Bugle Head corrosion resistant screws.



Matching grooves are cut into the foam. Slide the foam GFRC parapet completely onto the first set of studs. Slide 6" of Stud "B" into the front groove as shown in the illustration below.

- 4. Next step: Slide 2- sections of stud "A" (1.25"x1.25"x12") and one section of Stud "B" into the pre-cut grooves in the foam on the opposite side of the GFRC parapet. Leave 6" exposed of all three stud sections exposed. Secure Studs "A to the wall with screws in the same manner as the first section.
- Repeat the process on the next section and continue until you reach the end of the wall section. (Do not install stud sections!)
- 6. Cut the last parapet section to length. Then, instead of using Stud "A", install "Termination Stud Sections "C"" (These sections have a barbed design to allow the Parapet to be installed from the front without sliding from the side). Align the Parapet grooves on the Termination Stud "C" and push directly towards the wall. Once, fully in place, barbs will engage into the foam and parapet will be mechanically secured.
- 7. Install the metal Parapet Cap as shown securing the front to Stud "B". Use 1199 silicone adhesive to seal/adhere ends of each parapet section together. Maintain a gap the desired width of the grout joint. Recommend 1/8"-3/16" for sanded caulk, 1/4"-3/8" for grout.

Parts Required (not supplied with System):

Steel Stud "B": Cemco 1-5/8" x 1-1/4" 20-gauge 33 mill. or equivalent.

Termination Barbed Stud: Part# STU-DSB acquire from ICAP-USA

Screws: #10 x 1" corrosion resistant Bugle Head Deck screws

Silicone Adhesive/sealant: Dow 1199

Joint Grouts: Cementitious grout or silicone caulk color to match GFRC.



Installation Guide For C-Series (non-NFPA 285) (R-10)

Notice: ICAP Brick Panels requires:

A. "A Self-sealing, Liquid Applied, Air/Weather Resistant Membrane with Suitable Flashings to Prevent Water Intrusion".

B. A water Resistant Sealant applied to the Thin Brick Panels and Grout upon completrion of the installation.

Failure to correctly prepare the wall and seal the brick will invalidate the warranty.

Preparation:

A). Interface with Other Work:

Coordinate with installation of substrate required for installation. If Electrical, Plumbing and other Mechanical penetrations are installed after the exterior siding panels are installed, provisions for watertight sealing of all penetrations must be addressed.

B). General: Construct the wall in accordance with local building codes. In the absence of local building codes, install in accordance with the requirements of the IRC/IBC and the manufacturers installation instructions. Use a qualified installer. Wall preparation and requirements:

Wall Construction For Buildings less than 40' in elevation:

A wood or metal framed wall with study 16" O.C or less and sheathed with 7/16 OSB plywood min. and an air/water barrier complying with local building codes. (Consult your local building official for compliance).

For Building Structures in excess of 40' in elevation: See ICAP NFPA Installation Guide

C. <u>Air/Weather Resistant Barrier</u>: A Self-sealing, Air/Weather or other Weather Resistant Barrier as required by your local building official.

D. Flashings:

- 1). Install flashings in accordance with the air/weather barrier, window and roofing manufacturer's installation instructions, or in the absence of these instructions, install per section 703.8 of the 2009 International Residential Code (IRC) at the following locations:
- 2). Top of all doors and windows. A flashing is required at the top of each window, door and protrusion to prevent water from entering the wall cavity.
- 3). Flashings may be required at projecting lips or conversion to masonry or other sheathing, or an areas that may allow water to enter. Check with your local building official for requirements in your area.

E). Installation of ICAP Interlocking Insulated Panels:

Panel placement General:

The tongue flange must always be placed upward to prevent water intrusion into the wall. The panels are designed to be installed from bottom row and *left to the right no more than 2 rows at a time*. Inspect each panel for flaws or damage prior to attaching to the wall. Use a leveling method to ensure each row is straight and level before attaching to the wall or proceeding to the next row.

Installation Guide For C-Series (non-NFPA 285) (R-11)

Note: The ICAP system of modular panels still requires custom cutting and fitting at protrusions, doors and windows. Several methods are available as shown on page 10 and covered in the certified training program

F. Panel Installation:

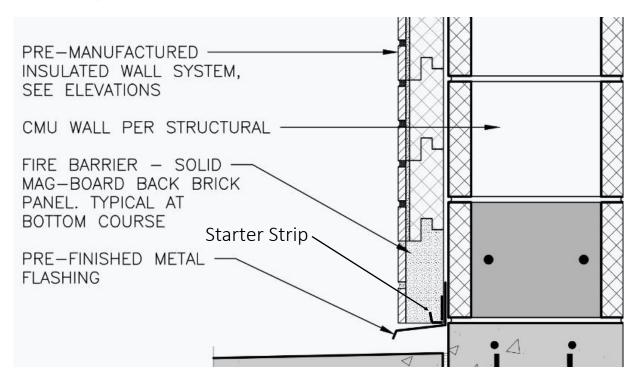
- 1. Inspect the wall to assure correct fit of substrates and framing. Studs: 16" or less on center cladding meeting the requirements above and an air/weather resistant barrier prescribed or its use by the manufacturer and local building codes. Determine its desired location in regard to elevation and relationship with the foundation, windows and other openings to align with the cladding height and width. Panels may be trimmed to fit at openings, but preplanning can save work and effort. Plan for termination at windows, doors, projections and upper terminations. See instructions in this manual for details of termination points.
- 2. **Fastener Attachment Pattern:** Secure the panels to the wall using the specified fasteners and locations at the specified spacing. See fastener chart on page 4 of this manual. See Table "A".
- 3. INSTALLING CLADDING PANELS (C-Series—Non-NFPA 285)
 - a. **STARTER SECTIONS:** Determine the location of the bottom panels and install the J-hook shaped "starter section" Part # SSS-048 at bottom of the wall and lap it a minimum of 1" (25.4 mm) over—the foundation. Attach every 6" (152.4mm) to the plate or studs with appropriate fasteners. **Note**: ICAP panels will hang ³/₄" below the bottom of the j-hook starter. Check local building codes for code requirements above grade and side walks, etc. In the absence of local codes, locate the panels 2 inches (50.8 mm) above side walks, pavement etc. and 4 inches (101.6 mm) Above grade. See Detail

4. WINDOW/DOORS/PROTRUSION TRIM

Note: See Page 6 and select the style of trim

- a. Install flashings around windows as required by local building codes.
- b. Install Standard Cladding panels (PP001240 Series (R-12) from the starter up to the bottom of the window. Notch the panels directly below the window as illustrated on Page 10 allowing enough room for the water table (Sill or drip cap) to install between the win dow flange and the notched out brick.
- c. Install the side window trim and fit to the water table.
- d. Install the upper window trim as shown on Page 10.
- 5. Proceed installing standard panels, cutting and fitting them to the window trim components.

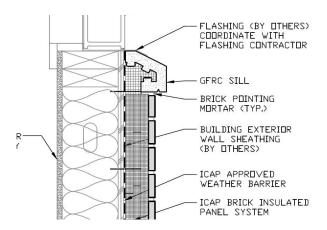
ICAP Brick Installation Instructions



Installation Procedure and optional methods:

Determine the desired location of "control" joints on each flat section of brick (commonly located behind drain pipes, side or center of windows. Control joints are installed to allow the installer to adjust panel length to fit the wall.

- 1. Install the Weep Screed Flashing as illustrated. Make sure it is level
- 2. Install the "Starter Strip" at a position to locate the bottom of the facia 1/4" above the Weep Screed flashing to allow for drainage. Make sure it is level or the installation will be difficult.
- 3. Install Flashings above all windows, doors & protrusions to meet the requirements of local codes.
- 4. Install Outside Corners one row high and begin working towards the "control Joint". Continue until you reach the lowest window level.
- 5. Cut the panel below the window allowing enough room for the GFRC Sill to fit between the cut panel and the window.



CastleRock™ Insulated Porcelain Warranty

P.O. Box 1258 Meridian ID 83680 Phone: 208 895-8557 Fax:

208 639-6422 web: www.ica -usa.com

WHAT DOES THE LIMITED WARRANTY COVER?

InsulStone, Inc., DBA ICAP-USATM warrants to the original purchaser/consumer at the time the products are installed, to be free from defects in material and workmanship in the course of manufacture.

This warranty is limited to the terms and conditions, exclusions and limitations, requirements and legal rights stated in this Warranty. In the event of repair or replacement under the terms of this warranty, the original warranty shall be limited to replacement or repair of the defective product and will extend for the balance of the warranty period from the date of the original installation. The coverage offered by this Express Limited Materials Warranty to the original purchaser and may only be transferrable to subsequent purchasers with the prior written approval of ICAPUSA.

WHO IS COVERED AND HOW LONG DOES THE COVERAGE LAST?

Should a material defect occur within 5 years of the original purchase by the registered purchaser, the manufacturer will in its sole discretion, replace the defective product before it is installed, or, during the first 5 years, reimburse the party for losses up to no more than twice the manufacturers selling price of the defective portion of the Product. During the 6th through 25th year, the warranty coverage shall be reduced by 5% per year such that after the 25th year all warranty coverage shall cease and the warranty coverage shall be terminated. The

Manufacturer's replacement of the defective product or granting of a refund pursuant this Warranty shall be the in its sole discretion and the sole exclusive remedy available to the covered party with respect to any defect. MANUFACTURER WILL NOT REFUND OR PAY ANY COSTS IN CONNECTION WITH LABOR OR ACCESSORYMATERIALS.

WHAT DOESN'T THIS WARRANTY COVER?

This warranty <u>does not cover</u> damage of any kind resulting from: Faulty or improper installation

Any and all labor for repair or replacement of warranted parts.

Shipping costs for replacement parts.

Movement, waving, buckling, or other distortions.

Damage from impact or contact with foreign objects, chemicals, etc.

Damage from failure to properly maintain the Product.

Installation of the Product in direct contact with dissimilar materials or use of incompatible caulking, adhesives, fumes, vapors or coatings.

Changes in the surface color resulting from exposure to the elements (i.e. soiling, staining or discoloring resulting from local conditions which InsulStone, Inc. has no control over.

Settlement or shrinkage of the property or structure.

Fire or heat from barbeques, heaters, vents, etc.

Lightning, hurricane, tornado, windstorm, earthquake, hail, snow or ice accumulation, or other acts of God.

Surface deterioration from air pollution, or seacoast environment.

Abuse, misuse, vandalism, or abrasion.

Product that has been painted, coated, colored or altered.

Chips, cracks that do not affect the performance of the Product are not covered under this warranty.

Any other causes beyond InsulStone/ICAP-USA's reasonable control.

Substitution or use of specialty parts not listed in ICAP-USA's standard parts and price list.

OTHER LIMITATIONS:

ICAP-USA cladding is designed for use as exterior cladding installed in accordance with its published installation instructions and should not be used as roofing, floors, on ceilings, or in locations that require water tight protection.

We reserve the right to discontinue or change any design, color or texture, of any of our products at any time and without notice or liability. If, for any reason, you make a warranty claim and the product type originally installed is no longer available, we may substitute another product determined by us to be of comparable quality and price.

There are no warranties expressed, implied or written that ICAP-USA accepts responsibility for other than this Warranty.

4.1CAP-USA IS NOT RESPONSIBLE FOR ANY CONSEQUESNTIAL OR INCIDENTIAL DAMAGES ARISING OUT OF ANY BREACH OF THIS EXPRESSED WARRANTY, OR ANY OTHER ORAL, WRITTEN OR IMPLIED WARRANTY THAT MAY APPLY TO YOUR PURCHASE, AS IT RELATES TO OUR PRODUCTS.

5. THIS IS YOUR EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTIABILITY AND FITNESS.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUSTIAL

DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. FAILURE OF PART OF THIS WARRANTY TO COMPLY WITH LOCAL OF FEDERAL LAW DOES NOT VOID DOCUMENT IN ITS ENTIRITY. This warranty shall be interpreted under the laws of the State of Idaho.

HOW DO 1 REGISTER THIS WARRANTY?

One application per property location where ICAP-USA/InsulStone, Inc. cladding is installed must be completed and mailed to ICAP-USA/InsulStone, Inc. P.O. Box 1258 Meridian, ID 83680 within 30 days after the original installation has been completed. The notice should include the following: (1) Name of owner

(2) Address of property or location of the installation (3) Date of purchase (4) Proof of purchase

HOW DO YOU SUBMIT A WARRANTY CLAIM?

You must submit a claim in writing with us within the warranty period and within a reasonable period of time after the defect is discovered. To initiate the claim, please go to www.icap-usa.com, contact us at sales.icap@gmail.com or by mail at:

ICAP-USA/InsulStone, Inc., PO Box 1258, Meridian, ID 83680. Phone#: 208.895.8557

ANY REPAIR OF THE PRODUCTS UNDERTAKEN WITHOUT PRIOR WRITTEN AUTHORIZATION FROM ICAP-USA/INSULSTONE, INC. PRIOR TO RECEIVING WRITTEN APPROVAL FROM INSULSTONE, INC. WILL VOID THIS WARRANTY.

This Warranty is effective as of 09/01/2016 and replaces all prior warranties.

Owner —	
Installation Address:	
Name of installing Contractor:	——— Date Installed: ———————
Date of Completion:	
•	Owner Signature
Return a copy of this Limited Materials Warrant	y to ICAP-USA PO Box 1258 Meridian, ID 83680