

CastleRock™ Porcelain Panel



CastleRock™ Laboratory Testing Information

CastleRock™ 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.ICAP-USA.com
Or by contacting us at icap.sales@gmail.com



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

Note: NFPA 285 Series Available

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 penetration, 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. Some areas require stainless fasteners.

Recommended Clearances:

- ICAP Cladding 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 not 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.

Fasteners, Spacing and Wind Load Ratings

Sheathing	Panel Fastener	Size	Spacing
To: Plywood/OSB	Corrosion Resistant Staples	ICAP Part #STA-025 16 ga. X 1" crown x 2-1/2" Leg	3" or less O.C.
To: Wood Studs with Plywood/OSB Sheathing	Corrosion Resistant Screws & ICAP Washer: Washer: 1-1/4" x .060 plated fender washer Screw: #10x3" Zinc Plated or Stainless Coarse Auger Thread, Type 17 Point	ICAP Part# SCW-103	To Studs 16" O.C. Max. & 4" O.C. to sheathing
To: Metal Studs with 7/16" min. Plywood/OSB sheathing or 1/2" Min. Type X Sheetrock Sheathing or equivalent	ICAP Screw and washer Washer: 1-1/4" x .060 plated fender washer Screw: #10x3" Zinc Plated T-25 Drive, Coarse Auger Thread, Type 17 Point	ICAP Part# SCW-4	To Studs 16" O.C. Max. & 4" O.C. to sheathing
To: Concrete or Masonry Block (CMU)	ICAP Screw and washer Washer: 1-1/4" x .060 plated fender washer Screw: #10x3" Zinc Plated T-25 Drive, Coarse Auger Thread, Type 17 Point	ICAP Part# SCW-4	8" O.C. Min. Avoid fasteners into grout joints Grout Joints
Concrete or Cement Block (CMU)	Fastener: RAMSET Part #1524SDP 3" smooth, straight shank pins with washers; or Pre drill & use Tapcon Screws with 1-1/4" washers	Part #1524SDP 3"	8" O.C. Avoid fasteners into Grout Joints

Wind Load Testing

<u>Model#</u>	<u>Evaluation Property</u>	<u>Ultimate Load PA (PSF)</u>	<u>Comments</u>	<u>Fasteners</u>	<u>Maximum Panel Size</u>
ICAP- 88	Uniform Load	88	R-10 to R-30 Panel	Screws to studs 16" OC	24" x 144"
ICAP-106	Uniform Load	106	R-10 to R-30 Panel	Screws to studs & Sheathing - Screws - 8" OC ,	24" x 144"
ICAP-127	Uniform Load	127	R-10 to R-30 Panel	Staples: 1" crown 3" OC to OSB or Plywood	24" x 144"

Fasteners



SCW-003

Wood Studs: Standard ICAP Screw/Washer Assembly: #10 x 4"
Zinc Plated or Stainless Steel— #2 torque 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) length varies with sheathing thickness.



WAS-114

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



TEK-825

TEK Screw - Used with 1-1/4" Fender Washer (WAS-00114) to attach ICAP foam panels to metal studs. Self-drilling/tapping #8 x 3" Zinc Plated or Stainless Steel square or torque head screws used with #WAS-00114 washer through tongue flange to attach panels to metal studs. Screw length varies with sheathing thickness.



To: Concrete or
CMU Block

TAP-410

Tapcon 410 Stainless Steel Concrete Screw, Phillips Flat

- Ideal for installing racking, shelving and conveyor systems
- Type 410 Stainless Steel provides extra corrosion resistance

LENGTHS:

1-1/4"

1-3/4"

2-1/4"

2-3/4"

3-1/4"

3-3/4"



STA-212

Staple 16 ga. Corrosion resistant 1" crown x 2-1/2" leg. Specialty staples and guns available from CastleRock. Contact: 208-895-8557 or info@castlerockx.com



SS0-002

Starter Strip Fastener - #9 min. x 2" Zinc Plated or Stainless Steel—T-25 Torque Drive, Course Auger Thread, Type 17 Point. Used to attach Starter Strip. Or #8 corrosion resistant TEK Screw



SS0-048

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.



Castlerock™ Screw/Washer Assembly for Steel Stud Attachment

FASTENER[®]SUPERSTORE

Screws Bolts Nuts Washers Rivets Spacers & Standoffs Rack Mounting Nuts Metric Sockets Mil-Spec Other Product Categories ▾


Home » Washers » Fender Washers » Steel / Zinc

#10 x 1 1/4" Fender Washers / Steel / Zinc

Outer Diameter: 1 1/4" | Thickness Range: .051" - .080"

Product Details

Part Number: 223209 | Carton Quantity: 25 lbs | Approx. Pcs Per Carton: 1,500



Please Note: Item in picture may not reflect size and finish of actual part

Pricing Information

1-2 Carton Price:	\$130.75 / Carton of 25 Lbs	(\$ 5.23 / LB)
3-4 Carton Price:	\$121.25 / Carton of 25 Lbs	(\$ 4.85 / LB)
5+ Carton Price:	\$112.50 / Carton of 25 Lbs	(\$ 4.50 / LB)

Technical Specs

- Washer Style Spec
- Plating / Finish Spec

Product Specs

Part Number:	223209
Product Category:	Fender Washers
Size:	#10
Length:	1 1/4"
Outside Diameter:	1 1/4"
Thickness:	.051" - .080"
Material:	Steel
Finish:	Zinc
RoHS:	Compliant

Part # Cross-Reference

1020WF

FASTENER[®]SUPERSTORE

Screws Bolts Nuts Washers Rivets Spacers & Standoffs Rack Mounting Nuts Metric Sockets Mil-Spec Other Product Categories ▾


Home » Screws » Self Drilling Screws » Steel / Zinc / Hex Washer Head / Unslotted

#10 x 2 1/2" Self-Drilling Screws / Unslotted / Hex Washer Head / Steel / Zinc

#3 Drill Point

Product Details

Part Number: 263526 | Carton Quantity: 2,000 pcs | Carton Weight: 29.60 lbs



Please Note: Item in picture may not reflect size and finish of actual part

Pricing Information

1-2 Carton Price:	\$273.42 / Carton of 2,000 pcs	(\$ 0.13671 Each)
3-4 Carton Price:	\$255.29 / Carton of 2,000 pcs	(\$ 0.12760 Each)
5+ Carton Price:	\$239.26 / Carton of 2,000 pcs	(\$ 0.11963 Each)


Technical Specs

- Screw Style Spec
- Head / Drive Spec
- Plating / Finish Spec

Product Specs

Part Number:	263526
Product Category:	Self-Drilling Screws
Size:	#10
Thread Pitch:	10-16
Length:	2 1/2"
Head Style:	Hex Washer Head
Drive Style:	Unslotted
Head Diameter:	5/16"
Head Height:	0.105 - 0.120
Width Across Flats:	5/16"
Washer Diameter:	0.384 - 0.414
Drill Point:	#3
Full / Partial Thread:	Full
Driver Size:	5/16
Material:	Steel
Finish:	Zinc
RoHS:	On Request

Select Number of Cartons to Order:

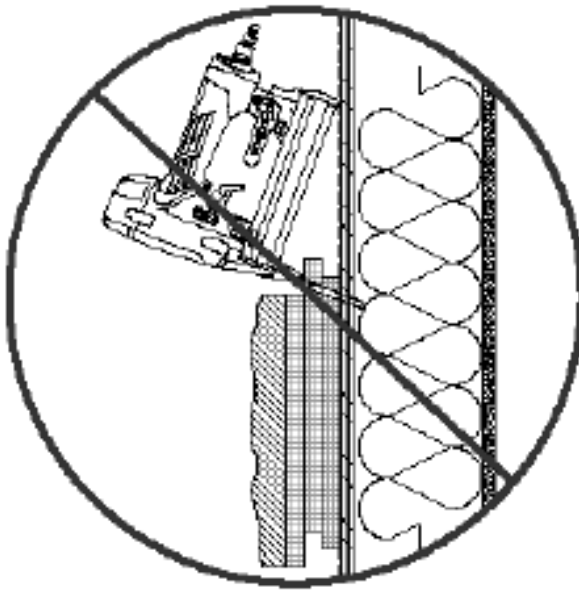
Add to Cart 

Fastener Installation:

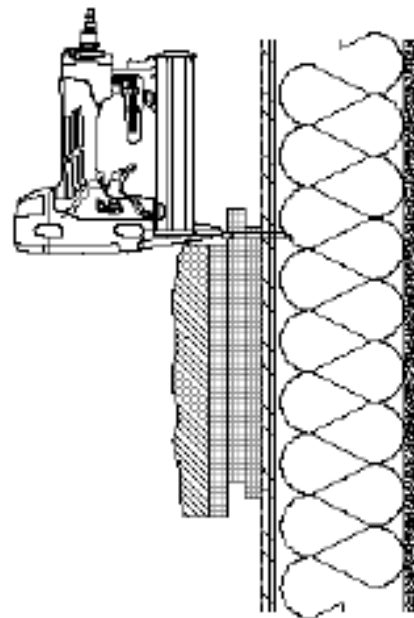
Install all fasteners horizontal as illustrated below. Fasteners must be located in the foam area of the panel and not impede the ability of the groove of the next panel to interlock.

Note:

1. Staple Location: 3" O.C.
2. Set air pressure so that Staple is head is flush with front of foam.
3. Staple 1" crown x 2-1/2"

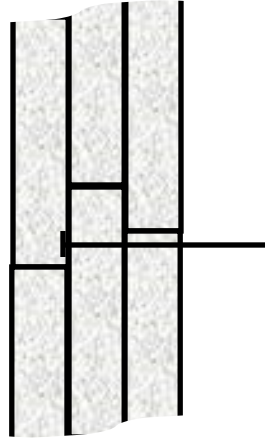


INCORRECT METHOD



CORRECT METHOD

Mechanical Panel Attachment



Caulking and Flashing Instructions

Caulking Trim: All end joints and borders of porcelain trim and transition from brick, porcelain or other materials are to be caulked and/or flashed to prevent water penetration.

Grouted Joint Porcelain: All joints of grouted porcelain are to be grouted and finished.

Lap jointed Porcelain: Lap jointed porcelain does not require caulking at joints, but does required caulking to prevent water penetration at locations where it joins to and window/door, trim or transition to another material.

Flashing:

All transitions, caps, etc. require appropriate flashing as specified in construction plans and by the architect. If details of flashing do not exist, consult your local building official, construction manager or the IBC or IRC

Installing on wall that are not straight or even

Uneven or crooked walls can present an issue when installing CastleRock Porcelain Panels. The following points should be examined to determine the best course of action.

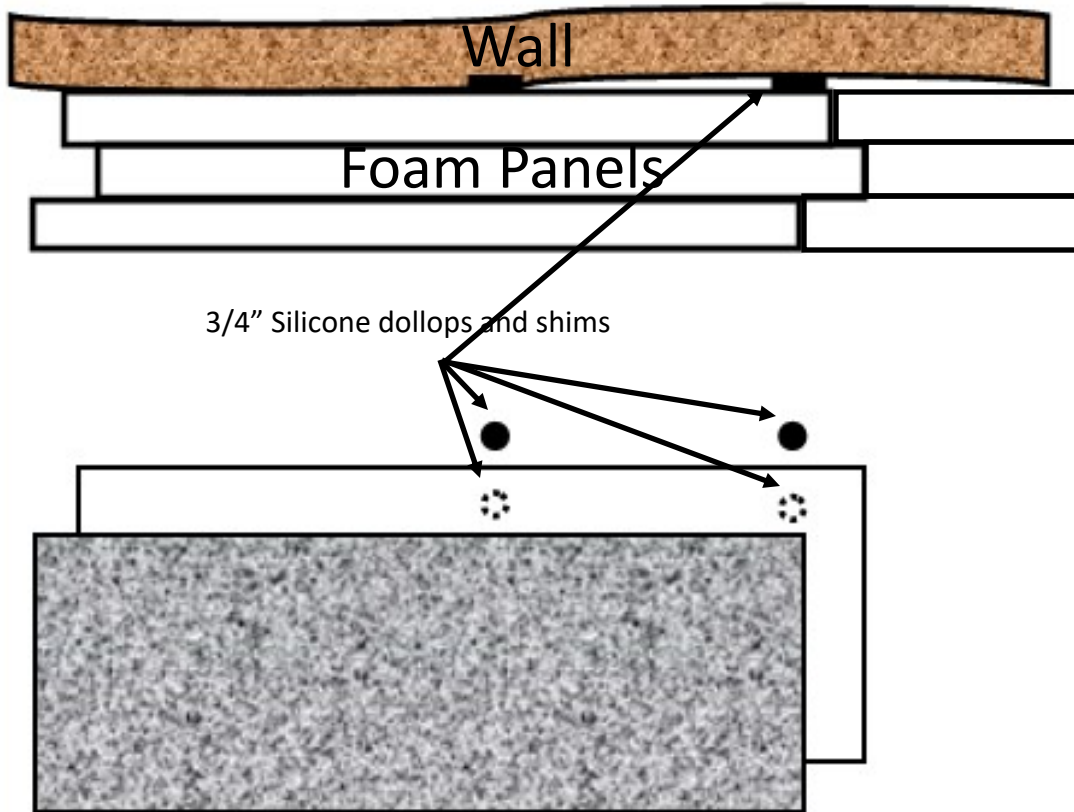
Determine the condition of the wall you are going to cover:

Walls framed from wood are seldom straight or flat. Some walls have imperfections to make them uneven. The CastleRock panels will follow the flatness of the wall.

Therefore, determine the acceptable finished surface of the porcelain before beginning. In most cases, slight “lippage” is acceptable, but if you want the surface to be very flush with minimal “lippage” at all, the labor effort will increase accordingly. Wood siding is seldom perfect and lippage variations occur. If this is acceptable, the installation will require less effort and labor cost.

See Installation Methods on the Following Page

Installing Flush Porcelain Siding on uneven walls



1. Use the straight edge, line or laser to align the face of the porcelain panel.
2. Apply a 3/4" inch dollop of silicone caulk to the wall to fill the void at the top and bottom of the panel as shown. **Note:** Do not over tighten fasteners. The silicone will harden and become a spacer to hold the panel to the wall.

3. Use screw/washer assemblies to secure to the wall over indented areas. Allow panels to float off the wall until the silicone spacers harden.
4. Use the reusable lip-page device as shown to align the face of the panel. The metal "T" shown in note #4 will cut into the foam and allow the "Nut" to hand tighten and align the panel face in most conditions. Allow 24 hours to cure, then remove device and proceed to the next section of wall.
5. Lippage devices are



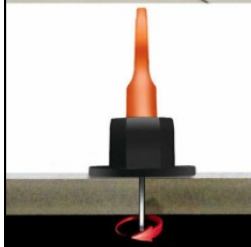
- 1 Paving the first tile, leave more than 1.5mm/0.06in. Close to the tiles.



- 2 Insert T-shaped needle along the gap in the tile. Then 90 degree rotation, T-shaped needle stuck at the bottom of the two tiles.



- 3 Adjust the caps with your hand/special wrench until the two tiles are on the same level.



- 4 About 5-6 hours after leveling, Before cement/adhesive is completely dry, rotate caps in the reverse direction, remove 90° T-needle until the word, take out.

CastleRock™

Installation Guide - Flush & Lap Siding Panels

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

Panel Installation:). 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.

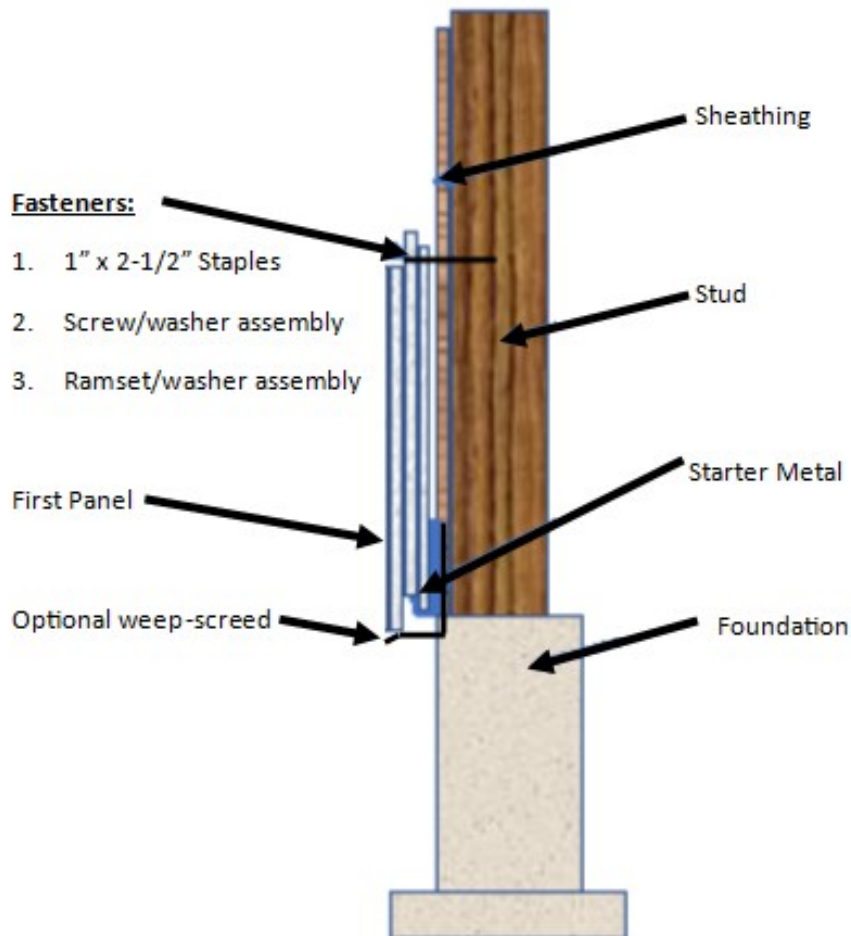
1. **Inspect the wall to assure correct fit of substrates and framing. Studs: 16” or less on center cladding meeting the requirements above and an air/weather resistant barrier prescribed or its use by the manufacturer and local building codes.** Determine its desired location in regard to elevation 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 pre-planning 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 ¾” 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: Flush Style: **See Page 9, 10, 11 and 12 for window trim and corner drawings.**

 - A.. Install flashings around windows as required by local building codes.
 - B.Install window/door and protrusion trim as shown on pages **10-13**
 - C. Install Standard Cladding panels from the starter up to the bottom of the window. Notch the panels around the window as required See **Page 11-12.**
5. Proceed installing standard panels, cutting and fitting them to the window trim components as shown in illustrations.

CastleRock Porcelain Panels

Starter Section and first panel installation

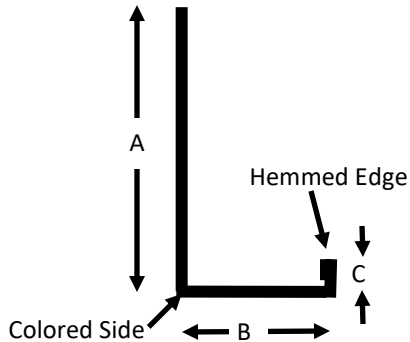


Trim Flashings

Corner, window, door, soffit & Cap

Window/Door/Penetration Flashing

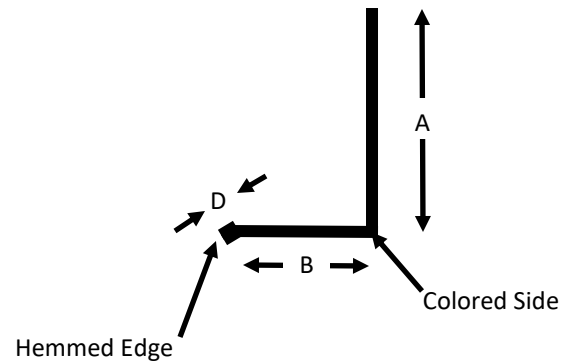
Flashing Material: Minimum 26 gauge galvanized, .030 anodized aluminum or .030 stainless steel as specified by the architect.



Foam thickness	R-Value	"A"	"B"	"C"	Hem
Porcelain thickness	8MM				
2"	10	4"	2.375"	.75"	.50
3"	15	4"	3.375"	.75"	.50
4"	20	4"	4.375"	.75"	.50

Above Window/Door/Penetration Flashing

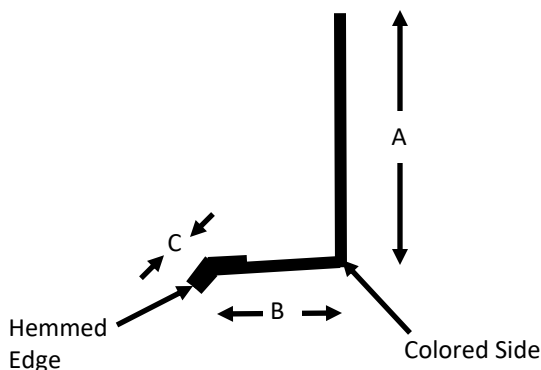
Flashing Material: Minimum 26 gauge galvanized, .030 anodized aluminum or .030 stainless steel as specified by the architect.



Foam thickness	R-Value	"A"	"B"	"D"	Hem
Porcelain thickness	8MM				
2"	10	4"	2.375"	.75"	.75
3"	15	4"	3.375"	.75"	.75
4"	20	4"	4.375"	.75"	.75

Below Window/Penetration Flashing

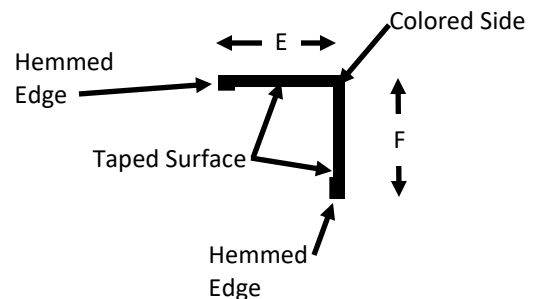
Flashing Material: Minimum 26 gauge galvanized, .030 anodized aluminum or .030 stainless steel as specified by the architect.



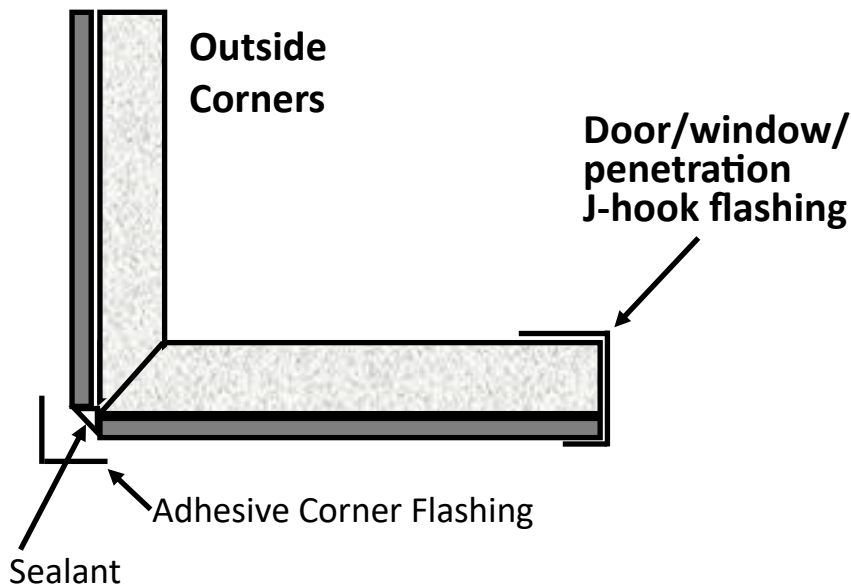
Foam thickness	R-Value	"A"	"B"	"C"	Hem
Porcelain thickness	8MM				
2"	10	4"	2.375"	.75"	1.50"
3"	15	4"	3.375"	.75"	1.50"
4"	20	4"	4.375"	.75"	1.50"

Above Window/Door/Penetration Flashing

Flashing Material: Minimum 26 gauge galvanized, .030 anodized aluminum or .030 stainless steel as specified by the architect.



Foam thickness	R-Value	"E"	"F"	Hem
Porcelain thickness	8MM			
2"	10	1.00"	1.00"	.50
3"	15	1.00"	1.00"	.50
4"	20	1.00"	1.00"	.50



#1 Intall CastleRock Starter (make sure it is level and straight

#2 Install Door/Window (J-channel) flashing trims & termiantion flashings

#3 Begin at a corner or end termination (Intall from left to right if possible)

Corners: Miter cut the foam to fit the adjoining corner panels.

Horizontal Panel Installation:

Cut the length of the first corner panel to set the stagger of joints (1/3 or 1/2)

Vertical Panel Installation

Start at the bottom and cut the panel for a 1/3 or 1/2 stagger of the joints

Install with the tongue joint on the right-hand side of the panel and from left to right

#4 Doors, windows & pentetrations:

Sides of doors, windows and pentrations:

When you reach doors, windows or penetrations, cut the last panel to fit and slide in from the top

Top of doors, windows and penetrations:

The panels above and below doors, windows and penetrations will require cutting to fit.

The "above door/window/penetration flashing" will hide the cut foam on the cut edge

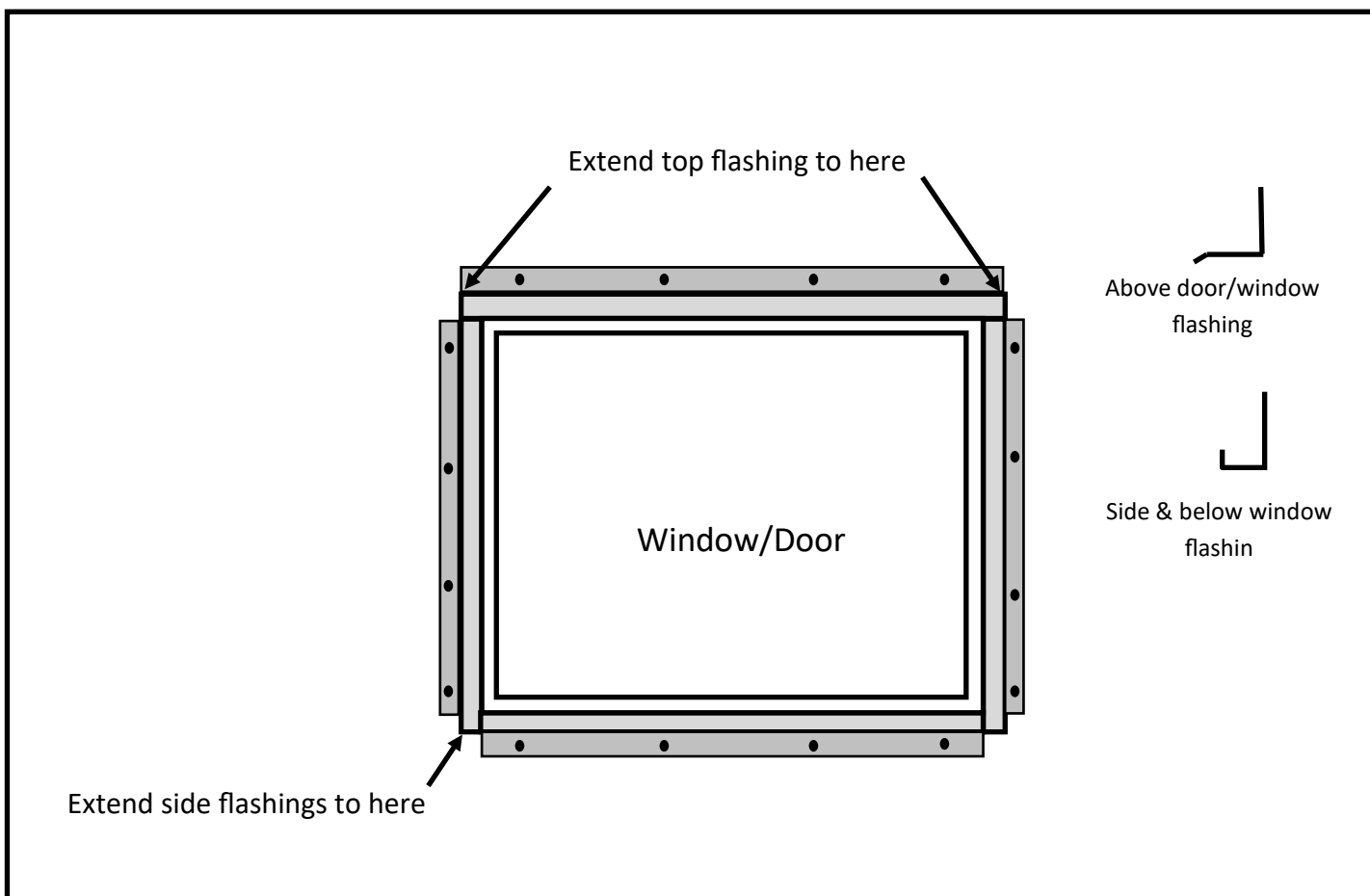
Caulk to seal for moisture penetration.

#5 Top Terminations:

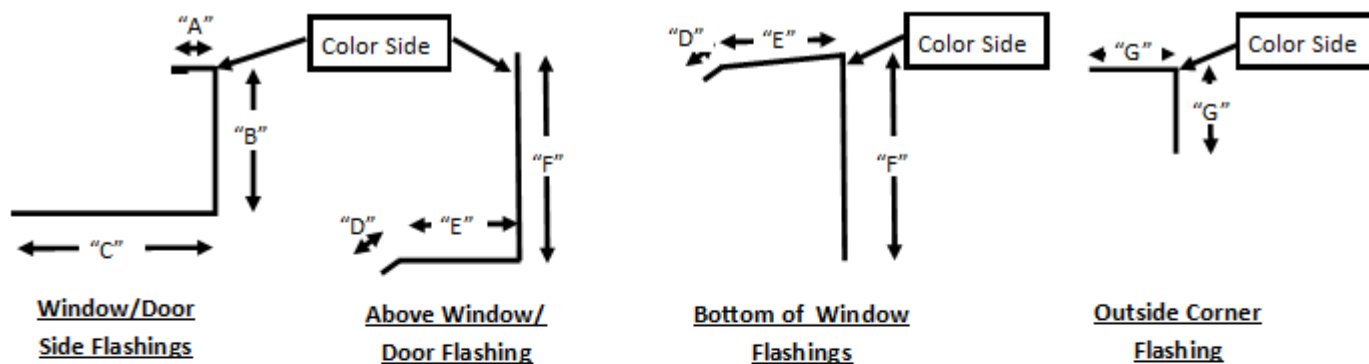
Soffits:

Cut the top panel 3/4" short to allow it to interlock and slide down onto the tongue of the panel below. Install a minimum 1" x 1" 90 degree angle formed flashing to the soffit protruding downward over the gap between the top of the last panel and the soffit. Expandable foam can be injected to fill the gap for insulating purposes.

Note: Continually check each row for straightness and level and adjust with shims if necessary.

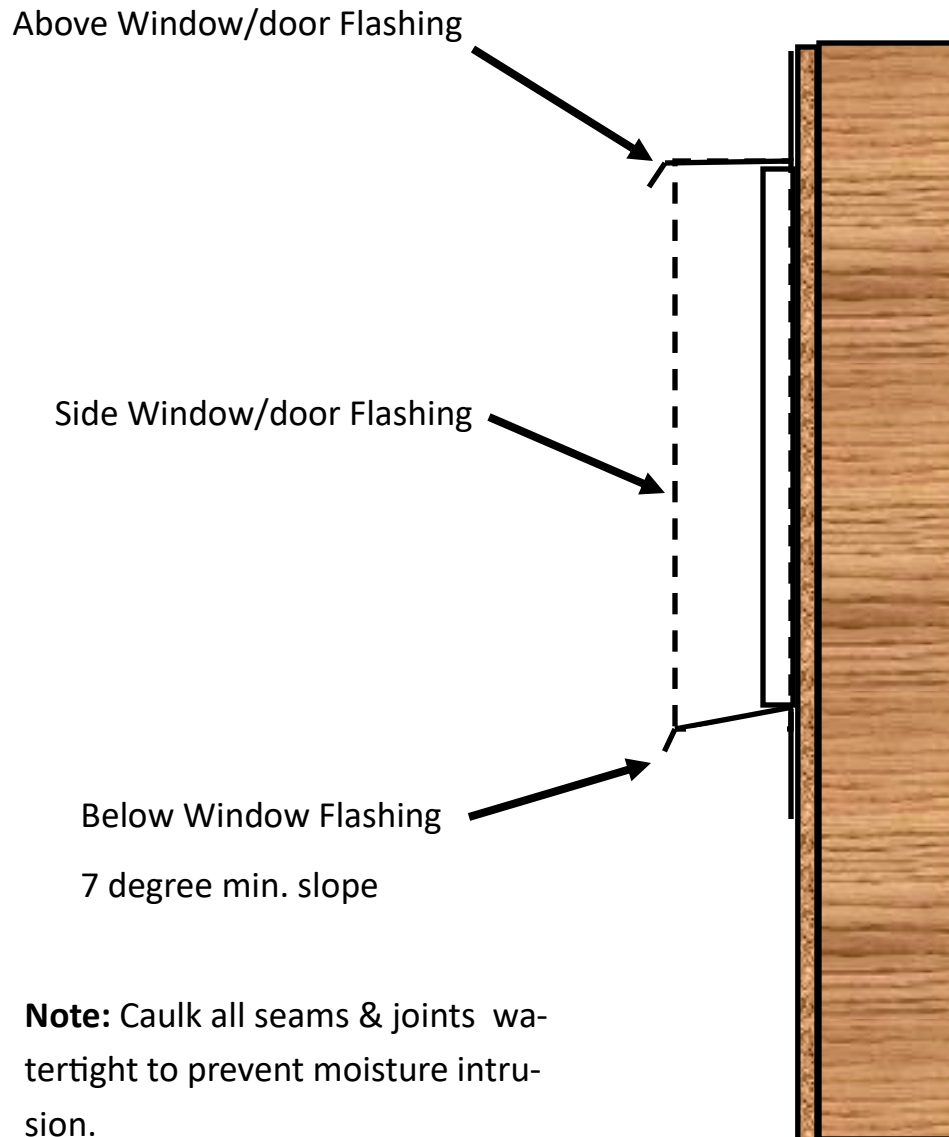


Window/Door/Corner Flashing Dimensions



<u>Foam thickness</u>	<u>R-Value</u>	<u>"A"</u>	<u>"B"</u>	<u>"C"</u>	<u>"D"</u>	<u>"E"</u>	<u>"F"</u>	<u>"G"</u>
<u>8MM (.315 in.)</u>								
2"	10	1"	2.375"	4.00"	.50"	2.375"	4.00"	1.00"
3"	15	1"	3.375"	4.00"	.50"	3.375"	4.00"	1.00"
4"	20	1"	4.375"	4.00"	.50"	4.375"	4.00"	1.00"
<u>10MM (.393 in.)</u>								
2"	10	1"	2.500"	4.00"	.50"	2.500"	4.00"	
3"	15	1"	3.500"	4.00"	.50"	3.500"	4.00"	
4"	20	1"	4.500"	4.00"	.50"	4.500"	4.00"	

Flashing Installation at windows, doors and penetrations

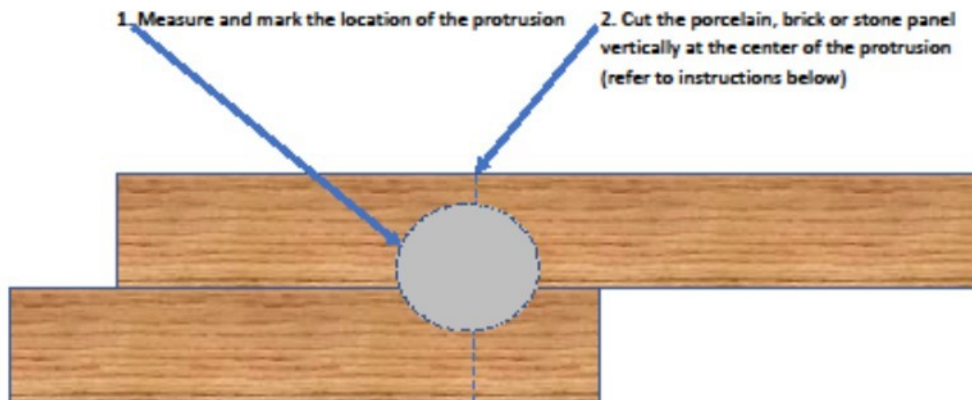


Note: Caulk all seams & joints watertight to prevent moisture intrusion.

Use: ICAP 199 or Cosentino silicone caulk.

- 1). Seal all edges between flashings and porcelain to prevent water intrusion.
- 2). Use backer rod and sealant between all flashings & window materials.

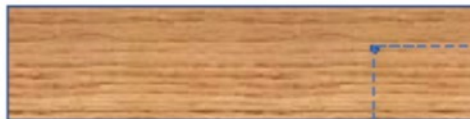
Fiting Around Protrusions/Pentration



Protrusions never fall where you want them to, so follow these instructions for an easy fit.

Round or irregular protrusions

1. Measure and mark the location of the protrusion
2. Cut the porcelain, brick or stone panel vertically at the center of the protrusion (Use an appropriate sized diamond hole saw to cut the hole)
3. If the hole is larger than your largest hole saw, multiple holes may be required to nibble the correct size opening.
4. Use backer rod and Dow 790 silicone to seal the fascia to the protrusion. Use masking tape on the fascia to create a clean line where the sealant ends. Allow 24 hours to cure, then remove the tape.



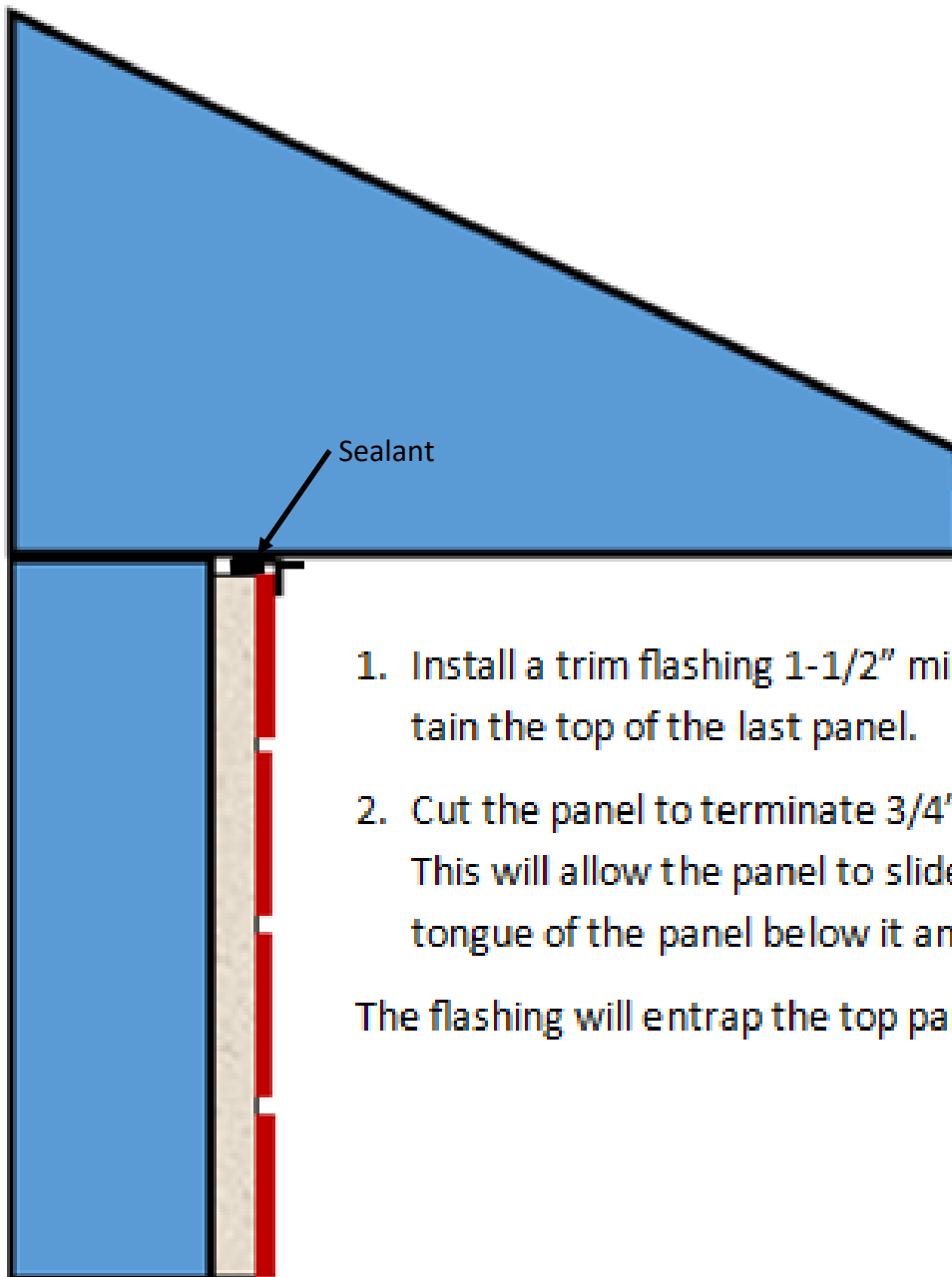
Rectangular Protrusions

Rectangular Protrusions can usually be cut with a diamond blade circular saw. Use a hole saw to drill a hole at each corner of the cut to prevent irregular cracking, then use the circular saw.

Electrical and Plumbing Penetrations:

It is very easy to cut penetrations through the porcelain. Diamond holes saws are inexpensive, available in a variety of sizes and quickly drill through the porcelain. For larger or irregular penetrations, drill 4 holes at the corner of a rectangle or in a pattern for round or irregular shapes. A diamond cutting wheel on a 4-1/2" right angel grinder is ideal for making the cuts between the holes. Use the same method to cut and fit porcelain panels to other walls, etc.

Soffit Termination



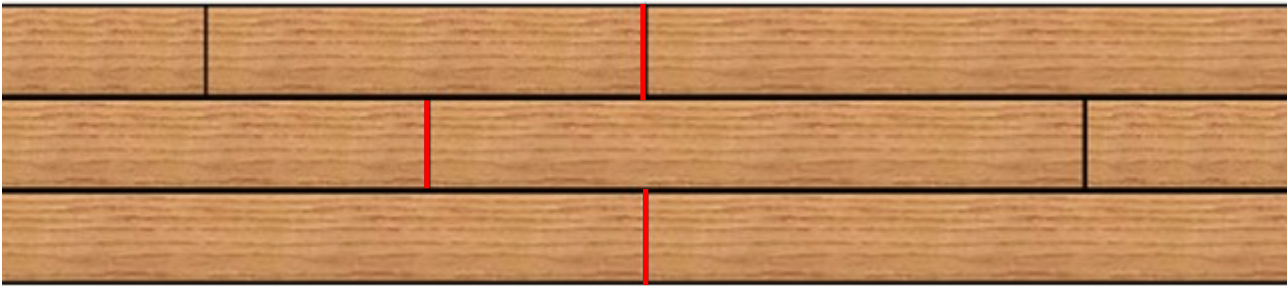
1. Install a trim flashing 1-1/2" min. to the soffit to retain the top of the last panel.
2. Cut the panel to terminate 3/4" below the soffit. This will allow the panel to slide up and over the tongue of the panel below it and down into place.

The flashing will entrap the top panel.

Expansion. Contraction Joints

Lap Siding Panels:

Lap siding naturally expands in horizontal joints because of design and overlap. End to end expansion joints can be accomplished by leaving a 1/4" joint and sealing with CastleRock 790 colored sealant/adhesive to match the porcelain. This highly flexible and durable sealant will last for many years (estimated 20+ years), but should be inspected annually and repaired if necessary but replacing sealant.



Expansion. Contraction Joints

Flush non-grouted Siding Panels:

Flush non-grouted siding panels also have natural movement due to the interlocking tongue and groove design, but require the same end expansion joints as lap-siding shown above. as recommended by the "Ceramic Tile Institute of America"

At each floor/story level and building expansion joint a 1/4" grout joint filled with CastleRock 790 joint material is required. This highly flexible and durable sealant will last for many years (estimated 20+ years), but should be inspected annually and repaired if necessary but replacing sealant.



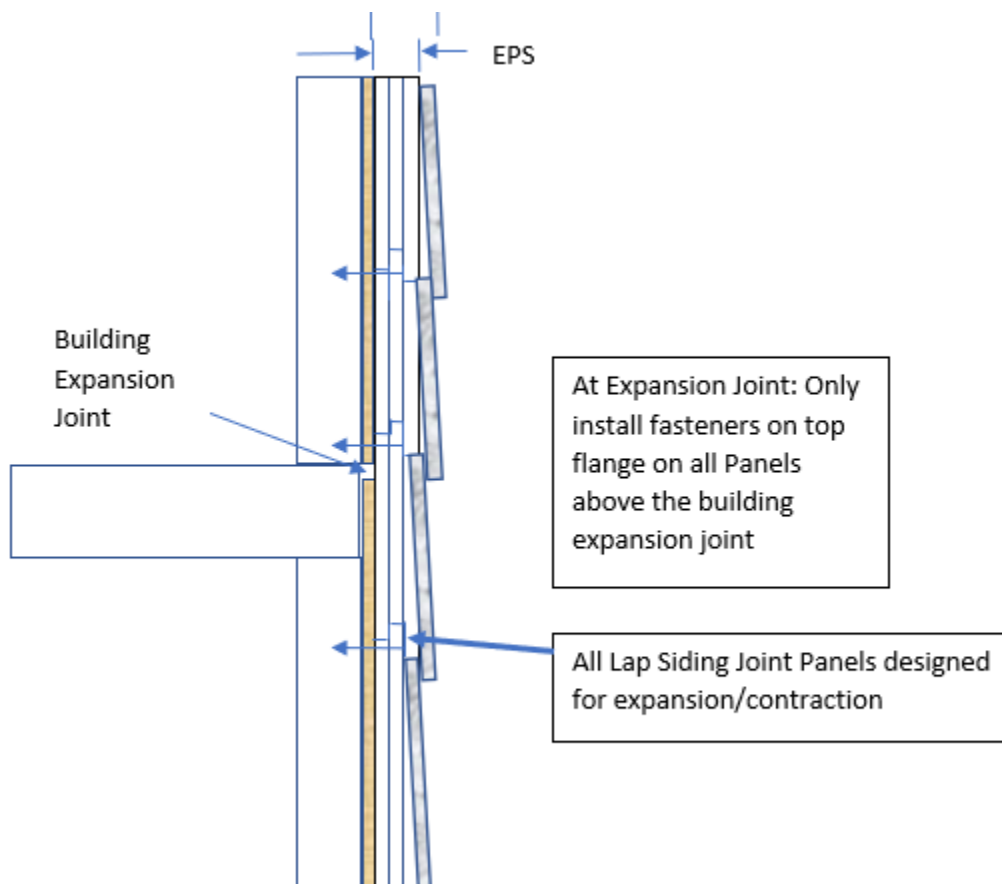
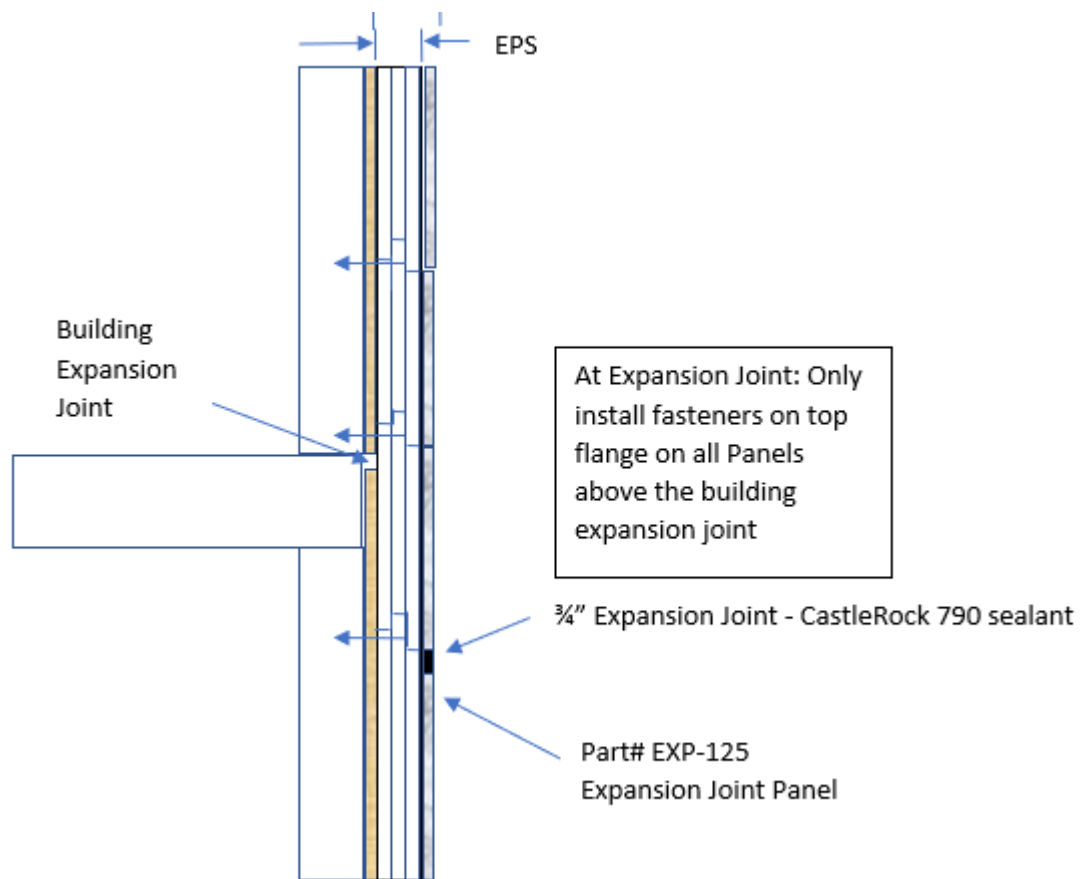
1/4" min. Horizontal Expansion
Joint at each floor/story level filled
with CastleRock 790 sealant*

* Not required on lap siding

Grouted Joint Siding Panels:

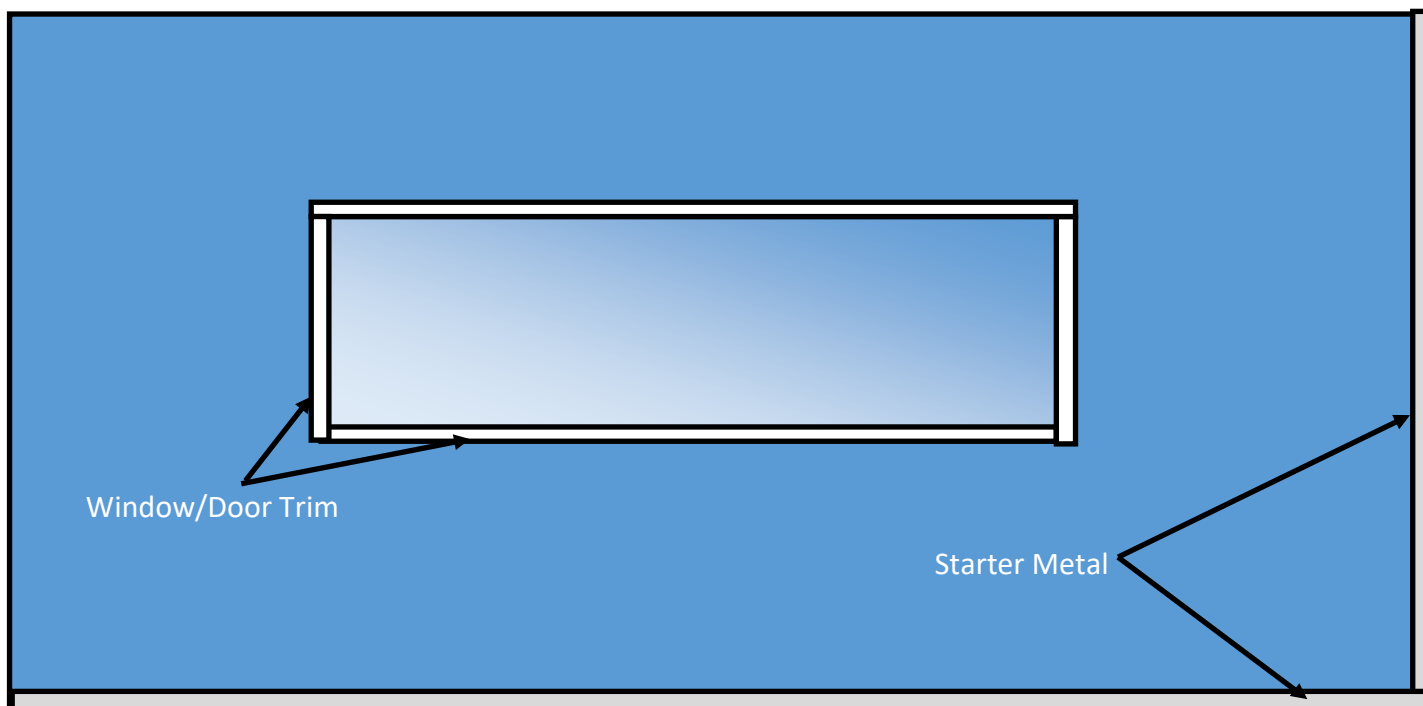
Grouted Joint Porcelain Panels require expansion joints as recommended by "Ceramic Tile Institute of America" and at each floor level/story and building expansion joint. This highly flexible and durable sealant will last for many years (estimated 20+ years), but should be inspected annually and repaired if necessary but replacing sealant.

Multi-floor Level Expansion/Contraction Joints

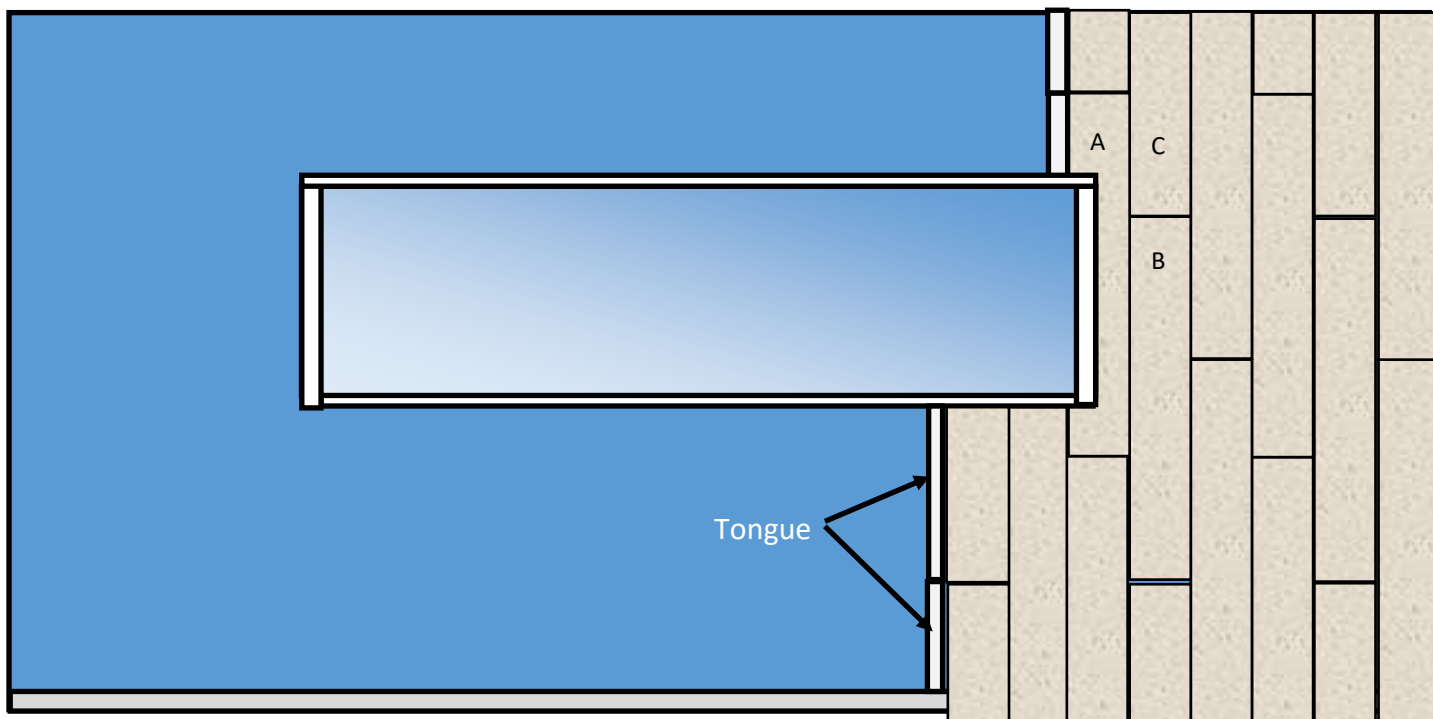


Installing CastleRock ICAP panels vertically

Note: Vertical installation of the ICAP system requires the use sheathing of OSB, plywood or Zip panels for attachment of the fasteners. Always install panels beginning on the right-hand side installing from right to left. The tongue will always be on the left -hand side. Vertical installation is very similar to horizontal once you have overcome the sheathing issues.



Install ICAP panels as illustrated below with the appropriate stagger specified. When approaching a window/door opening from the Right -hand side, cut Panel "A" to fit the opening first , leaving enough space for panels "B" & "C" to slide in from the top. The Left-hand side will not require special order like the right -hand side.



Seal all areas where flashing overlaps porcelain panels. Install a metal flashing cap over the top of the cladding or to a soffit as shown on page 15.

Cutting CastleRock Insulated Porcelain Panels

Below are some common brands of saws used to cut the CastleRock Panels. See instructions on the following page.



Super Thin Diamond Ceramic Saw Blade Porcelain Cutting Blade for Cutting Ceramic Or Porcelain Tile

Visit the GoYonder Store

★★★★☆ 1,557 ratings | 18 answered questions

Best Seller

\$11.74

Get Fast, Free Shipping with Amazon Prime & FREE Returns

Clip Save 5% with coupon. Terms

Get \$50 off instantly: Pay \$0.00 ~~\$11.74~~ upon approval for the Amazon Rewards Visa Card. No annual fee.

Size: 5-Inch



Bahco

11" BAHCO JAPANESE STYLE PULL SAW - PC-11-19-PS

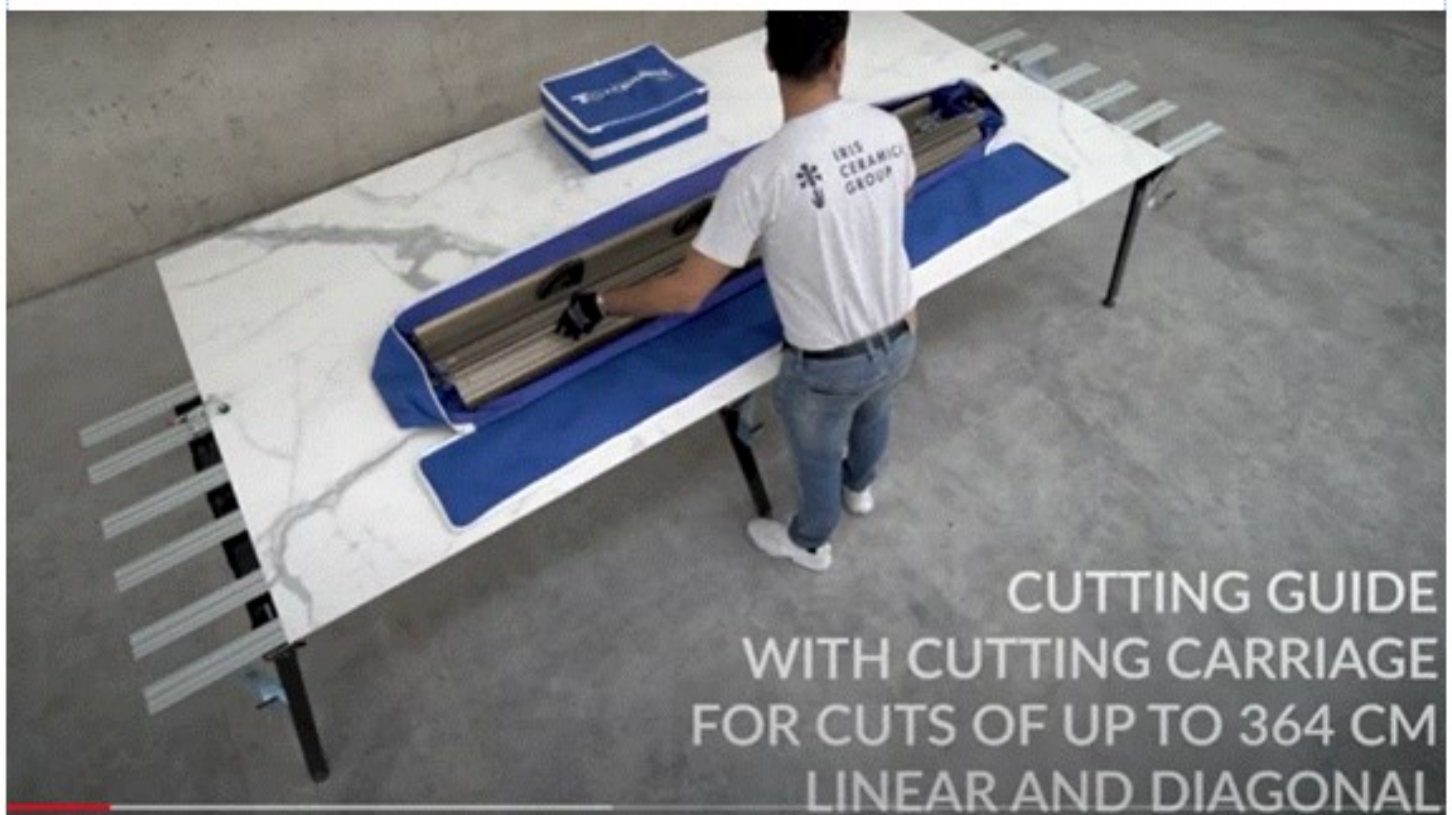
\$32.63



How to cut CastleRock Insulated Porcelain Panels

1. Place the panel with the porcelain upwards and the foam side downward on a table or saw horse assembly.
2. Set up a saw guide and clamp it to the panel for a straight cut.
3. If you are using water on the saw blade as you cut, only cut about 1/2" into the foam.
4. Once you cut the porcelain, use the hand saw shown on the previous page to cut through the foam.
5. If you are dry cutting, you can cut all the way through the foam panel in one motion.

Below is a typical cutting table with slats to allow the saw blade to cut in between without cutting the table.



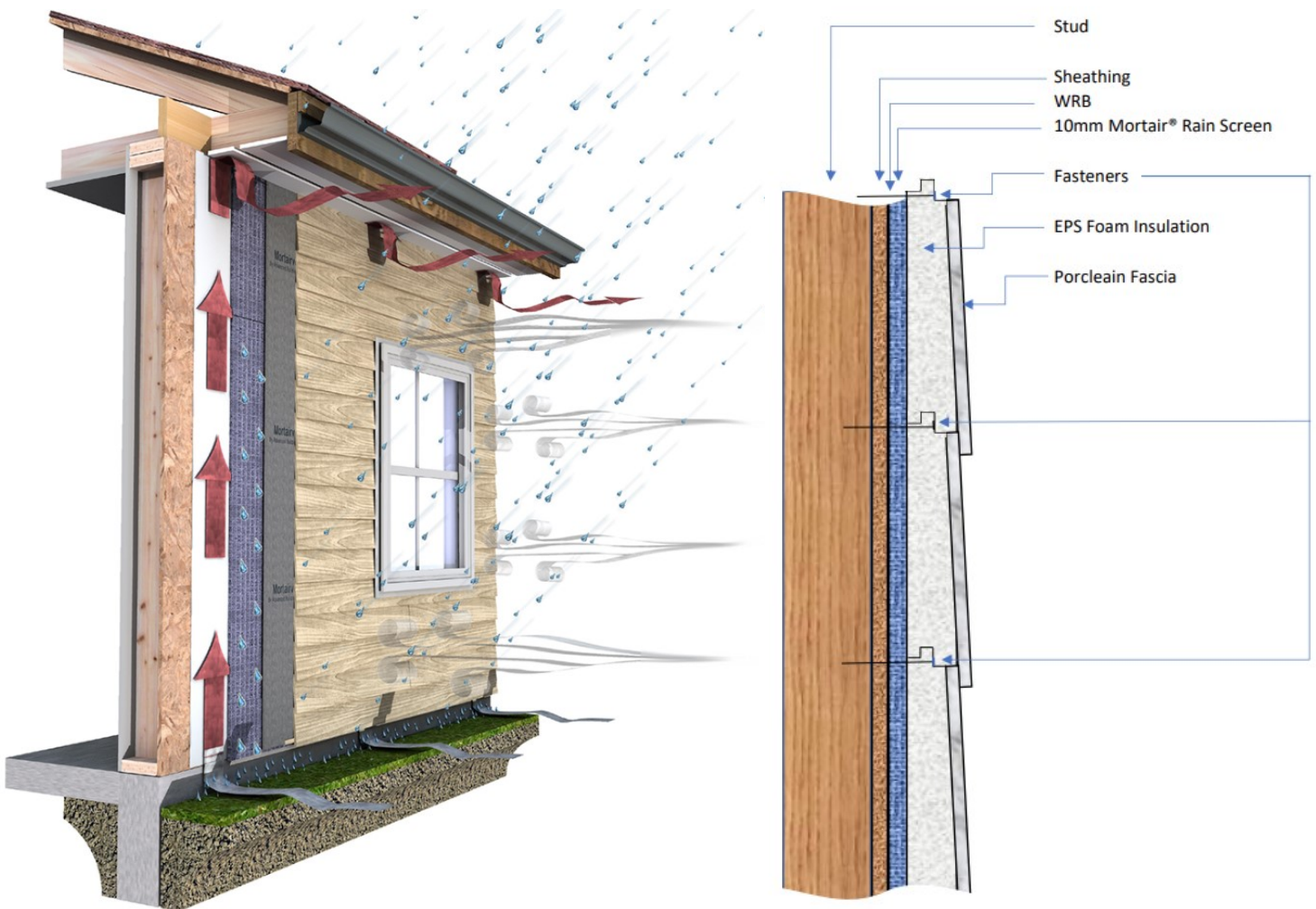
Click the following link to go to your YouTube videos:

[Large Format Manipulation: Slab System - YouTube](#)

Rain Screen Walls

Rain Screen walls are required in some coastal jurisdictions in varying thickness of air gap. Mortair® provides a rain screen mat that can be installed over the WRB prior to installing the CastleRock Porcelain Cladding. The cost is minimal to comply with these building codes or architectural specifications. Mortair® is available in 1/4" (6mm) and 3/8" (10mm) thickness.

Note: The illustration below shows brick instead of the CastleRock porcelain cladding system which can also be installed over the Mortair® mat with appropriate sized fasteners.



Please go to www.mortair.com for installation instructions and detailed illustrations of Installation procedures.

Porcelain Maintenance

Porcelain is one of the most dense, water resistant materials available. It will not warp, shrink, burn and is resistant to most chemicals. It never fades or discolors. The grout is another story, so be careful cleaning grout and follow the manufacturers cleaning instructions.

Mild Cleaning

Clean Your Porcelain with Water

Don't underestimate water. It's the foundation of most cleaners and has stellar cleaning properties when you use it by itself. The beauty of cleaning with water is that you're not using any harmful agents that might leave a residue.

Water is safe to use and will clean away a surprising amount of grime.

Stains and hard water spots

Deal with Porcelain Stains with Ammonia

Ammonia is a fantastic cleaner that you can use to clean windows and soothe wasp stings, and it will get your porcelain back to new condition in a hurry. You shouldn't use ammonia to clean your porcelain every time you clean, though, as repeated use is not good for porcelain.

But, when you encounter a stain that won't go away no matter what you do, ammonia is just what you need.

Power Washing

Gentle Power Washing works quite well and is fast. Grouts do not fair well under high pressure. House Cleaner or Ammonia with a gentle spray will clean most walls. Put on your rubber glove and use a soft sponge for difficult dirt or stains,

Caution: Styrofoam Insulation backing on Porcelain Panels

Do not use petroleum based cleaners or allow the Styrofoam insulation to be exposed to direct sunlight for extended periods of time.

CastleRock/InsulStone™

Insulated Brick, Porcelain, & Stone Cladding Limited Material Warranty

P.O. Box 1258 Meridian, ID 83680 Phone: (208) 895-8557 Fax: (208) 639-6422 email: info@castlerockx.com

WHAT DOES THE LIMITED WARRANTY COVER?

InsulStone, Inc., DBA CASTLEROCK™ warrants to the original purchaser/consumer at the time the products are installed, to be free from defects in material and workmanship during manufacture for a period of ten years from the date of installation.

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 CASTLEROCK/INSULSTONE.

WHO IS COVERED AND HOW LONG DOES THE COVERAGE LAST?

Should a material defect occur within 10 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 10 years, reimburse the party for losses up to no more than twice the manufacturers selling price of the defective portion of the Product. After the 10th 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 ACCESSORY MATERIALS.

WHAT DOESN'T THIS WARRANTY COVER?

This warranty does not cover damage of any kind resulting from:

- Faulty or improper installation
- 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/CASTLEROCK/INSULSTONE's reasonable control.
- Substitution or use of specialty parts not listed in CASTLEROCK/INSULSTONE's standard parts and price list.

OTHER LIMITATIONS:

1. CASTLEROCK/INSULSTONE 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 watertight protection.
2. INSULSTONE reserves 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.
3. There are no warranties expressed, implied, or written that CASTLEROCK/INSULSTONE accepts responsibility for other than this Warranty.
4. CASTLEROCK/INSULSTONE IS NOT RESPONSIBLE FOR ANY CONSEQUENTIAL OR INCIDENTAL 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 MERCHANTABILITY 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 CONSEQUENTIAL 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 ENTIRETY. This warranty shall be interpreted under the laws of the State of Idaho.

HOW DO I REGISTER THIS WARRANTY?

One application per property location where CASTLEROCK/INSULSTONE cladding is installed must be completed and mailed to CASTLEROCK/INSULSTONE, 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.CastleRockx.com, contact us or email us at info@castlerockx.com, or by mail at:

CASTLEROCK/INSULSTONE, PO Box 1258, Meridian, ID 83680. Phone#: 208.895.8557

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

This Warranty is effective as of 06/10/221 and replaces all prior warranties.

Owner _____

Installation Address: _____

Name of installing Contractor: _____ Date Installed: _____

Date of Completion: _____

Phone # _____ Owner Signature _____

Return a copy of this Limited Materials Warranty to CASTLEROCK/INSULSTONE PO Box 1258 Meridian,