# CastleRock

# **CRX** Porcelain Panels

## CRX Installation Guide

Warning:

(Read these instructions thoroughly before attempting to install)

CRX-USA™ Cladding – Patent #: USA #8,176,701B2, Canada 2,588,294

### Test reports and certifications are listed below:

Intertek/Warnock Hersey Test Reports

Test reports available at les@castlerockx.com CastleRock website <u>www.castlerockx.com</u> Installation Guides available at <u>www.castlerockx.com</u> Or by contacting us at <u>les@castlerockx.com</u>

**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"

**ANSI A137.1-2012** American National Standard Specifications for Ceramic Tile - Version 2013.1

**ASTM C373** Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products

#### <u>Summary</u>

ASTM E84, CAN/ULC S102 (2007)Flame Spread Rating:0Smoke Generation Rating:0ASTM 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

# **CRX** Series

# Installation Guide

	<u>R-Value</u>	Height Range	Length Range
Flat Panels	10-20	5" - 24"	24" - 60"

Note: Panels sizes are dictated by porcelain panel sizes. Check with CRX for available sizes.

Tools Required				
Screw gun and staple gun:				
Torque Drives for fasteners				
Staple gun for 1" crown x 1-1/2" staples				
Staples: 18 gauge corrosion resistant staples 1" crown x 2-1/2" legs				
<b>Diamond Porcelain blade, water cooled saws</b> : Bridge saw, circular saw, or track saw.				
Saws (Diamond Blade):				
Tile saw water cooled circular saw (Dewald, Milwaukee, etc.)				
4- 1/2" Right Angle Grinder w diamond blade				
Wet/dry diamond blades for saws				
Scaffolding/manlift (w/window pkg. May be required for large panels)				
Ladders				
Normal Carpentry and Construction Tools				
Safety Equipment				

### 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 CRX products. Installer certification is available through the CRX-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 CRX-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 CRX 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 CRX 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; or plastic weep screed a minimum of 0.050" with a minimum vertical attachment flange of 3 ½" wide.

#### Walls and Wall Systems

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

#### **Recommended Clearances:**

- CRX 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)
- CRX-USA<sup>™</sup> 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 CRX-USA<sup>™</sup> 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 CRX-USA<sup>™</sup> 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.

CastleRock CRX non-insulated porcelain panels with integral rainscreen

Pre-Engineered Porcelain Panels (CRX Series) Interlocking Panels:

Manufactured by: CastleRock Building Materials, Inc. DBA: ICAP/InsulStone

- A. Standard Flat Porcelain Panels:
  - 1. Color:
  - 2. Standard Panel Sizes CRX Series

Width: 36" Inches (1,600mm)	Height: 6.00	Inches (571.5mm)	Part# CRX636
Width: 48"Inches (3,200 mm)	Height: 8.00	Inches (571.5mm)	Part# CRX848
Width: 48.00 Inches (1600mm)	Height: 9.00"	Inches (355.6mm)	Part# CRX948
Width: 48.00 Inches (1600mm)	Height: 24.00	Inches (177.8mm)	Part# CX2448

#### Starter Components:

1. Starter metal 48":



#### REQUIRED SPECIALTY TOOLS

Traditional carpentry and cladding tools, caulking, etc. and the following specialty tools available from ICAP:

- 1. Special staple gun 1/4" crown with 1/4" x 1-1/2" corrosion resistant staples
- 2. Cordless Screw gun or drill with adjustable torque settings
- 3. Wet/Dry Tile saw (Preferably a bridge saw) with diamond blade for cutting porcelain
- 4. Laser Level, 36" min level, or string Lines to level courses

#### C. FASTENERS: ACCESSORY MATERIALS:

Staples: 16 gauge weather corrosion resistant staples: 1" crown x 1-1/2" leg

## 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:

Staple location: 3" O.C. Staple through the plastic tongue flange (head embedded into the plastic flush



## **Fastener locations:**

- Attach all panels with fasteners located on the tongue surface approximately 1/2" form the edge of the porcelain.
- 2) Space the fasteners 3" on center on the tongue flanges. Make sure the head of the fastener is flush with the surface of the tongue material. If using staples, set the air pressure to 80 PSI to insure the correct penetration.
- 3) Fasteners:
  - A. 7/6" min. OSB/plywood

1"x1-1/2" wide crown staples 3" on centers

B. Studs:

Spax<sup>™</sup> brand : 1/4"x1-1/2" power lags or equivalent into studs, 16" on centers.

C. Type X Gypsum (1/2" min.)

Spax<sup>™</sup> brand: 201010450 or equivalent 3" on centers.







## Additional Requirements for Large Panels over 10" narrow direction

6"x36" & 8"x 48" are considered plank style and are exempt from these requirements.

1) Larger panels over 11" wide the narrow direction and of any length up to 126" require the following:

An adhesive applied to the vertical tongue during assembly installation as illustrated below:

A. Install panel "A" with the appropriate fasteners through the tongues



B. Use Dow Corning 1199 Silicone Glazing Sealant

#### EXECUTION

#### **EXAMINATION**

Do not begin installation until the sheathing and WRB have been properly prepared.

If - preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

Water resistive barrier shall conform to ICC-ES AC38 acceptance criteria.

#### PREPARATION

Clean surfaces thoroughly prior to installation.

Protection: Prevent work from occurring on the opposite walls to which cladding is being applied.

#### INSTALLATION

Installation as shown on drawings and as specified in accordance with manufacturer's installation instructions. Horizontal Panels are designed to be installed from left to right and vertical panels from right to left.

#### Sheathing:

OSB/plywood sheathing minimum of 7/16" thick attached to the studs as prescribed by the sheathing manufacturers installation instructions.

**Fasteners:** Non-corrosive staples with a minimum head size of 1" and leg length of 1-1/2" installed on the tongue flange a minimum of 3" apart.

#### Weather-Resistant Barrier:

Installation of weather barrier and wall panels shall comply with local building code requirements or Authority Having Jurisdiction. Install weather barrier per manufacturer's installation instructions.

Flashing: Install flashings as required by local building codes:

Flashing and flashing accessories shall be corrosion resistant materials and integrated with the air/weather barrier materials. Flashing shall be installed at all through-wall penetrations and at terminations of the panel system, around doors, windows and other protrusions in accordance with local building codes. Install flashing around penetrations and terminations of the veneer application. Install flashing to divert water run-off away from the finished surface area.

#### D. PATTERNS AND LAYOUT

 Determine the area to be covered with CRX Porcelain Panels and lay out the pattern. Recommended Porcelain panel joint locations use panel sizes full, 2/3 panel and 1/3 panel segments in a rotated sequence for the best appearance. Terminations at corners, windows, doors and other protrusions must form a watertight barrier.. Transitions to other cladding components must be watertight. Refer to plans for further instructions.

#### E. ELECTRICAL BOXES

A. The standard CRX panel is 7/8" thick. Plan electrical box protrusions accordingly.

B. Other wall penetrations: Other wall penetrations can be addressed in a similar manner to the instruct ions.

#### F. INSTALLING CLADDING PANELS

1. STARTER SECTIONS: Determine the location of the bottom panels and install the J-hook shaped "starter section" Part # S148 at bottom of the wall and lap it a minimum of 1" (25.4 mm) over the foundation or below the sheathing. Attach every 6" (152.4 mm) to the plate or studs with appropriate fasteners. **Note:** ICRX panels will hang ¾" below the bottom of the j-hook starter. Check local building codes for code requirements above grade and sidewalks, etc. In the absence of local codes, locate the panels 2 inches (50.8 mm) above sidewalks, pavement etc. and 4 inches (101.6 mm) Above grade.

2. Begin by installing from the corner of the building aligning the first panel to fit to the panels from the adjacent walls with the tongue upward. Horizontal panels install from left to right. Vertical Panels from right to left.

- 3. Upon reaching the bottom of an opening, cut the panels to fit to the protrusion, window or door.
- 4. **Do not notch** porcelain panels to fit around the window, door or protrusion. Crosscut the porcelain panel where it meets thee window/door, etc. See drawing #3

#### G. PANELS ABOVE THE WINDOW

Cut panels above the window/opening/protrusion to fit as below and above protrusion. Keep seems aligned as shown. See Drawing #3

#### J. CORNERS

#### **Outside Corners**

**Butt Corner:** Cut and fit the panels for the porcelain to fit as desired by removing the necessary EPS foam as shown to fit the corner. See drawing #2

Inside Corners: Cut the panels at an inside corner to fit the panels from the adjacent wall. Grout may be used to hide any irregularities.

#### K. SOFFITS

1. Soffit :

Install panels until the last row will not fit under the soffit. Measure the distance between the top of the panel and the soffit. Cut the panel  $\frac{3}{2}$ " (19.05) shorter than the desired space. Install the panel by inserting it into the space between the uppermost panel and the soffit. The panel will slide down over the tongue of the panel below, leaving a space between the top of the cut panel and the soffit.

2. Screw the panel to wall through the tongue section on the side of the panels. Install backer rod and sealant into the space between the top panel and soffit. See detail #5

#### L. PARAPETS

 Install panels up to the height of the parapet. The top row of cladding will need to be cut to the correct height to match the height of the parapet. Secure panels by screwing through the tongue flange where possible and then "toe nail" screw the top of the panel to the parapet with appropriate screws.
When the metal cap is installed, it will secure the top panels in place. See detail 11.

2. Install the metal cap over the top and sides of the panels as required.





## **Outside Corners**

#### Butt Joint:

Trim

the backer board from the "proud" panel to allow the connecting pane to fit as shown. Trim the backer on the other panel to fit. The proud side is the side towards the most visible side of the building.



## Drawing #3



Window/Door Sides (Top View)

Drawing #4



## **Cutting CastleRock Insulated Porcelain Panels**

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



## CRX-USA

## Porcelain Cladding Maintenance Instructions

CRX Porcelain Cladding can be installed in numerous design possibilities and a variety of looks. The Porcelain is easily cleaned due to the nature of the porcelain and its impervious surface. The grout joints are more vulnerable and should be treated carefully based on the type or grout :

#### Routine Porcelain Tile Care

Regular, basic cleaning with warm water and mild soap is sufficient to keep porcelain cladding looking good. You can also use gentle, everyday multipurpose spray cleaner to remove hard water deposits and mildew. Do not use cleaning products that contain acids or ammonia (and other harsh chemicals) as these can damage grout and glazed surfaces of the tile. Cladding can be spray washed at normal residential water pressure levels or with low pressure washers. Do not hold nozzle closer than 24 inches from the tile or grout to avoid damage of force waater between joints.

#### Grout Care

100% Silicone Grout: This grouting method may be cleaned in the same manner as routine porcelain care described above. Be careful not to force water in the grout seams or damage the silicone.

Cementitious Grouts: This type of grout should not be cleaned until it is completely dried and cured, then the grout should be treated with a silicone sealer. Grout, the material used to fill the spaces between tiles, is porous, and sealing it at this time will simplify maintenance in the future (Epoxy grouts and 100% silicones grouts do not require a sealer). We recommend you apply a sealer at least twice a year for maximum stain protection over cementitious grouts.

#### Heavy Duty Cleaning

Neglected or situations where extreme dirt, smog, mold, mildew or dust is common may require more intensive cleaning. Clean glazed wall tiles with a scouring powder or all-purpose cleaner applied to a non-metallic pad. Rinse and wipe dry. In extreme cases use a commercial tile cleaner, or apply a strong solution of an all-purpose, non oil-based cleaner or scouring powder paste. Let stand for five minutes, brush and scrub. Then rinse with clean water and wipe dry..

#### Purchasing Maintenance Products

Ceramic tile and Natural Stone cleaning products and sealants may be purchased at your local home center or floor covering store. Consult the manufacturer of the cleaner or sealant for usage instructions and more detailed information about how its specific cleaning solution

#### DO NOT...

Use cleansers containing acid or bleach for routine maintenance.

Use wax cleaners, oil-based detergents or sealants to maintain your tile (sealants may be used on grout joints).

Use ammonia (it will discolor grout).

Use harsh cleaning aids like steel wool pads or scouring pads containing metal.

Use a cleaning agent that contains color

## CastleRock/ICAPTM 10 YEAR EXPRESS LIMITED WARRANTY

#### WHAT DOES THE LIMITED WARRANTY COVER?

InsulStone, Inc., DBA ICAP-USA<sup>TM</sup> 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. MANUFAC-TURER 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

- Any and all labor for sepair 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 Productare 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 rice 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 RESPONSI BLE FOR ANY CONSEQUESNITAL **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 PUR-CHASE: 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 MERCHAN-TIABILITY 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 AL-LOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUITIAL

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 wairanty shall be interpreted under the laws of the State of Idaho.

#### HOW DO 1 REGISTER THIS WARRANTY?

One application per property location where ICABUSA/InsulStone, Inc. cladding is installed must be completed and mailed to ICAP-USA/ IggalStoge, 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 14%

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 seasonable 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/agailStoge, Inc., PO Box 1258, Meridian, ID 83680, Phone#: 208 895 8557

ANY REPAIR OF THE PRODUCTS UNDERTAKEN WITHOUT PRIOR WRITTEN AUTHORIZATION FROM ICA P-USA/ INSULSTONE, INC. PRIOR TO RECEIVING WRITTEN APPROV-AT 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 of Completion: -

Phone # --

#### - Owner Signature

— Date Installed:

Return a copy of this Limited Materials Warranty to CastleRock/ICAP-USA PO Box 1258 Meridian, ID 83680