



# HORIZONTAL

**Enhanced Bracket Mounting System  
Installation Instructions**



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Mon-Fri 9am-5pm EST





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## READ ME FIRST!

### \*\* PLEASE READ PRIOR TO BEGINNING YOUR INSTALLATION \*\*

Synthesis™ porcelain shower wall panels should always be cut with water. Dry-cutting Synthesis™ panels will produce silica dust which, when inhaled, is known to cause silicosis, an irreversible but preventable lung disease. Exposure to respirable silica dust may also cause other serious diseases including lung cancer. If panels must be cut without water, a safety dust mask approved for silica dust is required.

Whenever possible, it is best to acclimate your Synthesis™ porcelain shower surround to the surrounding environment for at least 24 hours prior to installation. This will prevent condensation from forming on the panels, which may prevent your suction cups from gripping properly.

When opening and unpacking your Synthesis™ porcelain shower surround kit, please be sure to lift the panels vertically out of the carton. DO NOT drag the panels horizontally, as this may damage the panels underneath.

The Synthesis™ panels are designed to be removeable for ease of repairing future plumbing issues. To preserve this key feature of your Synthesis™ installation, please be sure to adhere to all directions regarding type and quantity of adhesives to be used throughout the process.

We recommend verifying the color of the color-matched silicone sealant with the end user prior to installing the finished sealant. We have done our best to provide a color-matched product, however, the end user may want a different color or a contrasting look. If this is the case, the 100% silicone sealant may be purchased locally in the color of the end user's choice.

Synthesis™ large-format porcelain panels with polished finishes exhibit a "rippling" effect when viewed in direct light. This is a characteristic of all porcelain products and is simply more noticeable in large-format panels with a polished finish. This is not the basis for replacement of the product.

Some Synthesis™ wall panels can be rotated 180° at time of installation based on the end users preference. We **STRONGLY RECOMMEND** determining the location and veining direction for all of your Synthesis™ panels **PRIOR** to cutting or trimming. When doing so, the 3/4" thick edge of the side wall panels **MUST** remain at the front of the shower alcove.

See [Installing your Accessories](#) for important information about drilling and cutting Synthesis™ porcelain composite wall panels.



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## **PLANNING YOUR INSTALLATION**

Consider the location of the Synthesis™ seams when placing plumbing fittings and valves. Some clients prefer to align these items with the seams while others choose to avoid the seams altogether. Whichever path you choose, it is best to consider it ahead of time.

Plumbing fixtures are to be configured for a 1-1/4 "finished wall thickness.

Consider the locations of your shower accessories, such as shower niches, grab bars, and shelves, in relation to the Synthesis™ seams. In-wall blocking is required for grab bars and may be required for other items. Placement of these items is subjective but must be considered in advance.

### ***Shower Accessories MUST be installed AFTER Final Installation***

Consider the method of finishing the exposed panel edges at the front of your Synthesis™ porcelain shower surround. The exposed panel edge is 3/4" thick and can be finished with a metal or plastic "L" trim or with a casing or trim of your choice. The 1/2" plywood strips at the front of the shower surround may be omitted and replaced with a 1/2" drywall return if necessary.

Framing width of side (return) walls cannot exceed 37-1/8" in depth (front to back).

Clear framing width of rear wall cannot exceed 60" in overall width.

Overall height of wall panels is 94-1/2" (two 47-1/4"H panels stacked.) Bottom panel may be trimmed by up to 5" on the bottom edge. Top panels may be trimmed by up to 22" on the top edge. See [Altering a Panel](#) for additional information.

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## **PACKAGING AND HANDLING**

**This is how the crate will be packaged.**



### **About the Packaging**

The wood pallet and Box dimensions are approximately 65" x 53"

The wood Pallet and box weigh approximately 550 lbs.

### **Loading and unloading.**

When picking up a standard forklift, with standard forks can be used.

It will require 2 people to unload this Box.

Panel must be lifted straight up and out of the Box.

Dragging the panel across each other may result in damage.

***This Product must be shipped in a flat position not allowing anything to be stacked on top of it.***

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## **LIST OF INCLUDED COMPONENTS**

- 2 58-1/2" W x 47-1/4"H vitrified porcelain composite wall panels
- 4 35-7/8" W x 47-1/4"H vitrified porcelain composite wall panels
- 8 Sidewall Brackets
- 8 Backwall Brackets
- 4 1/16" Bottom Backwall Spacers
- 4 1/8" Bottom Backwall Spacers
- 4 3/16" Bottom Backwall Spacers
- 48 #8 x 1" Bracket Installation Wood Screws
- 4 36" x 7" moisture-resistant skirt boards
- 2 60" x 7" moisture-resistant skirt boards
- 40 screws and collars for moisture-resistant skirt boards
- 4 48" x 2" x 1/2" plywood strips
- 24 #6 x 1-5/8" drywall screws
- 10 Lippage control posts & caps
- 1 Roll of closed-cell foam weatherstripping
- 1 Roll of watertight flashing
- 2 Tubes of translucent adhesive/sealant
- 1 Tube of color-matched 100% silicone sealant
  - *The color is shown on the bottom of the tube.*
- 1 Cartridge of 2-part epoxy adhesive with extra mixing tips



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## LIST OF TOOLS AND SUPPLIES

- 5" electric angle grinder (13 amp recommended)
- Angle grinder blade designed for cutting porcelain
  - (5.0" Diamax Cyclone Porcelain Blade or similar)
- Angle grinder core bits designed for cutting porcelain
  - (Apexx UCS/Porcelain Core Bit or similar)
  - 3 ½" Core bit for the most common shower diverters
  - 1 ¼" Core bit for plumbing fittings
  - 3/8" Core bit for drilling pilot holes for cut outs or accessories
  - Finger bit for shaping and contouring
- Angle grinder base attachment with 50-grit stone polishing pad
  - (Weha Matrix Dry 50 or similar)
- Pencil
- Tape measure
- Caulk gun
- 6ft spirit (Bubble) Level
- 2ft spirit (Bubble) Level
- Painters tape
- Carpenters square
- Phillips screwdriver
- Drill
- Screw gun with Philips screwdriver bit
- Spray bottle of water
- 1 pair 8" glass-handling suction cups
- Electric miter saw
- Eye protection
- Safety dust mask approved for silica dust
- Hearing protection
- 360-degree laser level (optional)
- Right-angle adapter for screw gun (optional)



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## **LIST OF TOOLS AND SUPPLIES**

*Continued*

Synthesis™ Installation Kit \*

- Epoxy applicator gun \*
- Synthesis™ vertical aluminum jig \*

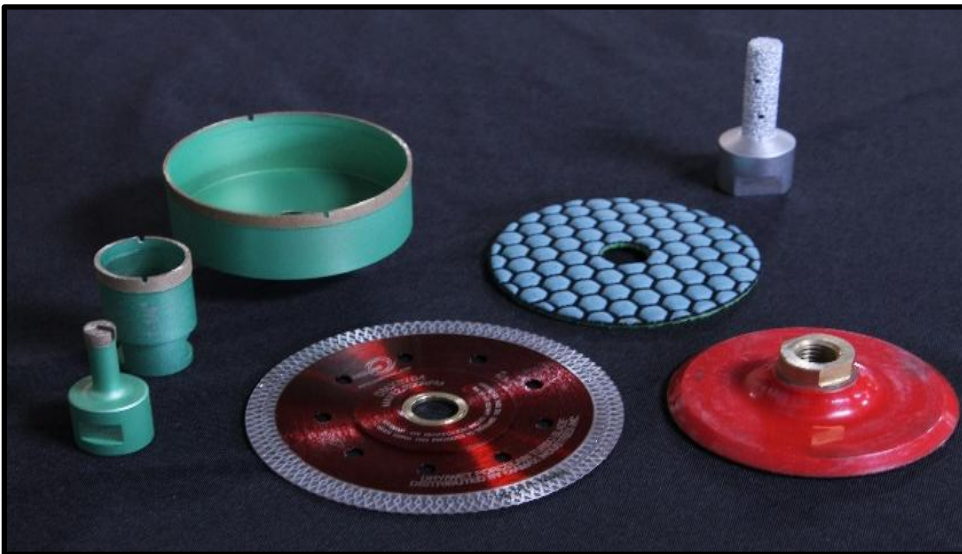
\* Available separately from Panel Composite Systems, Inc.



Synthesis™ Cutting Kit \*

- An assortment of recommended blades, bits and tooling for use in modifying, trimming and scribing Synthesis wall panels

\* Available separately from Panel Composite Systems, Inc





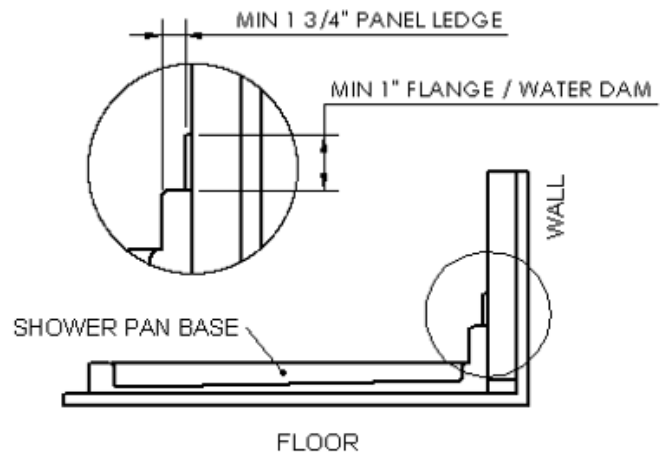
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## COMPATIBLE SHOWER PANS

The Synthesis™ porcelain shower surround system is compatible with multiple types and styles of shower pans.

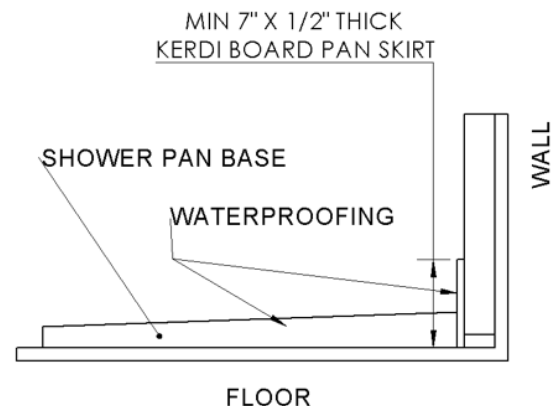
**Modular one-piece shower pans** may be manufactured from acrylic, fiberglass, cultured marble, solid surface or any other material.

- The modular shower pan must have a minimum 1" high flange/water dam and a minimum 1-3/4" wide panel ledge.
- Install your modular one-piece shower pan according to the manufacturer's instructions, being sure to make it level, then proceed with installation of your Synthesis™ porcelain shower surround system.



**Tiled shower pans** may be installed using a traditional mud pan method, a thin-mud-bed-and-membrane method, or a pre-sloped pan form such as those manufactured by Schluter, Noble, and others.

- No matter which method is used, the following requirements apply:
  - The pan must be installed and waterproofed according to the manufacturer's instructions.
  - The bottom of the walls must include a 7" high strip of 1/2" moisture-resistant backer board (included with the Synthesis™ kit).
  - The pan and the 7" high moisture-resistant strips must be waterproofed as part of the pan installation and as recommended by the manufacturer.
  - The edges of the pan should be as level as possible to avoid unsightly gaps at the bottom of the Synthesis™ panels.




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## COMPATIBLE SHOWER PANS

*Continued*

**Tile ready Fiberglass shower pans** such as Tile Ready and KBRS can also be used with the Synthesis™ shower system.

- These shower pans will be installed using the same methodology as the modular one-piece shower pans.
- The pan skirt will be installed to the top of the water dam and flashed to the shower pan.
- We recommend tiling your shower base **BEFORE** the Synthesis™ panels are installed to allow for the removal of the panel after installed



**INDUSTRY LEADING**

Equipped with our patented perimeter flange and hard curb attachments, the Linear Tile-Basin® comes surface ready with an industry leading PSI rating of 118.

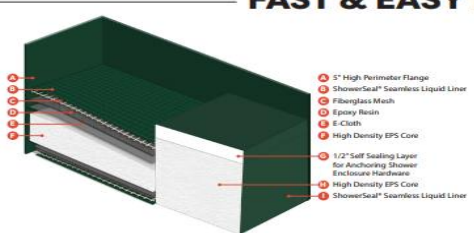
**NO LEAKS. PERIOD.**

Our patented leak-proof design makes the KBRS Linear Tile-Basin® the most trusted factory waterproofed, and ICC approved, tileable shower base in North America.

**CUSTOMIZE IT**


Linear Tile-Basin® shower pans are available to be manufactured into unlimited custom sizes (up to 9500 square inches), so you can get it in any size or shape you can imagine.

**FAST & EASY INSTALLATION**



- 3" High Perimeter Flange
- ShowerSeal™ Seamless Liquid Liner
- Fiberglass Mesh
- Epoxy Resin
- E-Cloth
- High Density EPS Core
- 1/2" Self Sealing Layer for Anchoring Shower Enclosure Hardware
- High Density EPS Core
- ShowerSeal™ Seamless Liquid Liner

Not only is the KBRS Linear Tile-Basin® a rock-solid alternative to a field-sloped mortar bed, it is also specifically designed to protect your shower long term. By utilizing the patented 1/8" perimeter flange, water will take the path of least resistance directly into your shower drain. Unlike our competitors, our protective barrier flange is guaranteed to prevent moisture from escaping the system from behind the wall, substrate, or sub-floor.

  
[WWW.KBRS.COM](http://WWW.KBRS.COM)

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## **BRACKET TYPES**

There will be three brackets that can be used in your installation.



### **The Backwall Bracket**

This bracket will be used to install the backwall of the shower system.



### **The Standard Return Wall Bracket**

This bracket will be used to install the return walls.

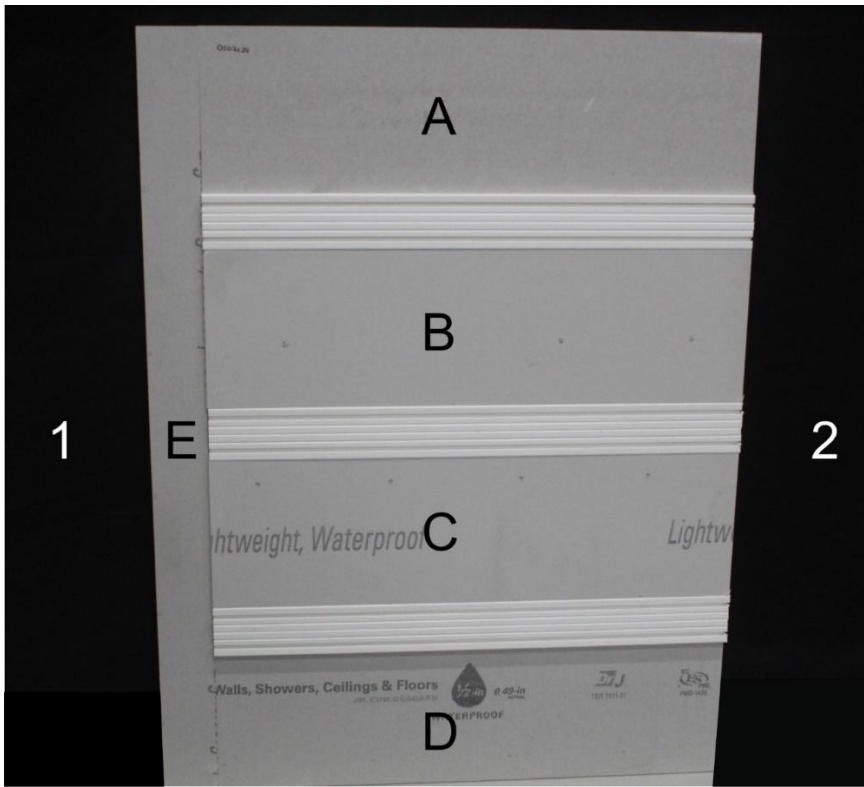


### **The Short Return Wall Bracket**

This bracket will be used in pairs in place of the standard sidewall bracket if there is something that would impede the use of the standard bracket.

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## PANEL LAYOUT



Areas A, D, E are all 1/2" Backer Board.

Areas B and C are 1" Backer Board.

Side 1 with the E has a 3/4" Profile.

Side 2 has a 1 1/4" Profile.

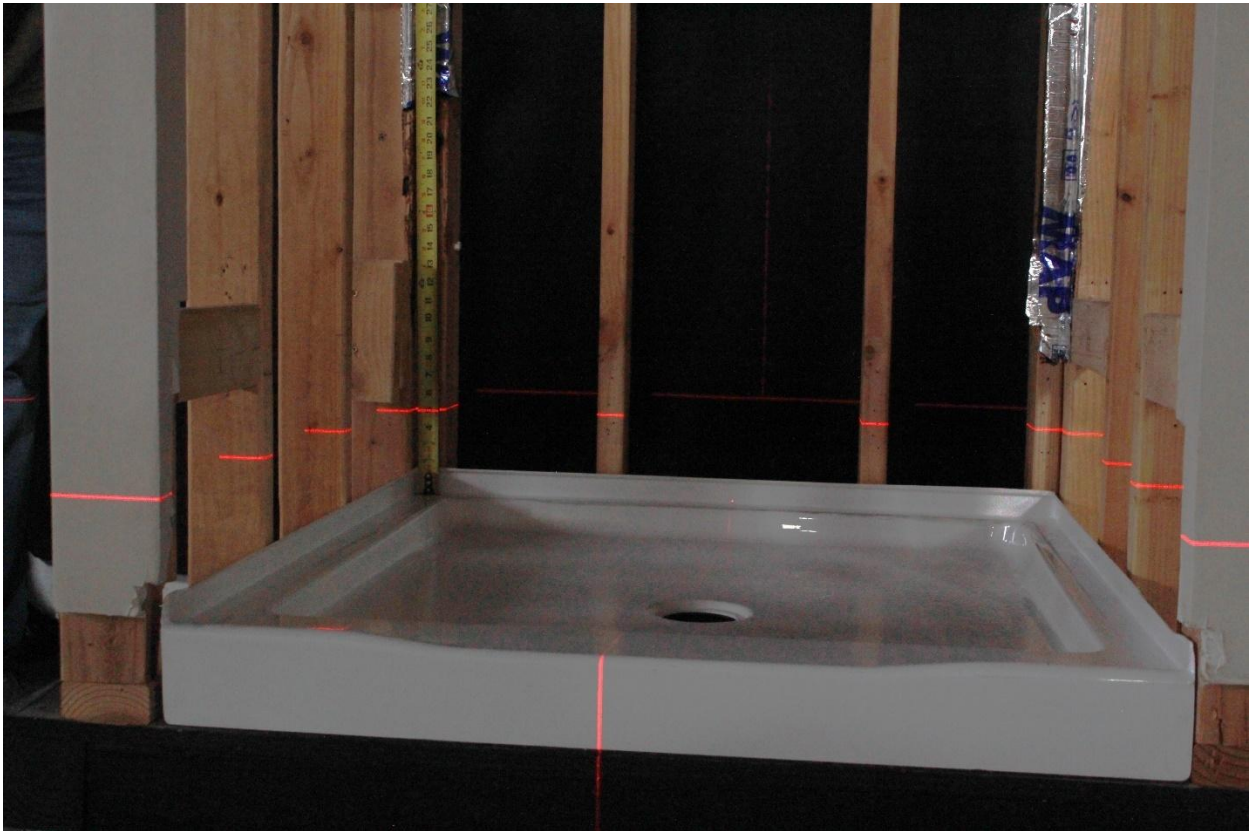
The side with the E should always face the outside of the shower and should never be cut.

All Alterations should always be done on the 1 1/4" side (2) of the panel.

Areas A or D can be used as the seam line and should not be altered.

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## **FINDING THE HIGHEST POINT OF THE PAN**



Using a laser measure all four corners of the pan to determine the highest point.

This can also be done by using a bubble level and drawing a line around the shower.

By finding the highest and lowest point of the pan you can determine if any of the panel bottoms will need to be altered.

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## **CORRECTING YOUR FRAMING**

Make sure the return walls studs are flat, in line and true.



If any of the studs are out and not in line, you may be required to plane the stud or studs in question.

Blocking will be required for the backwall brackets.

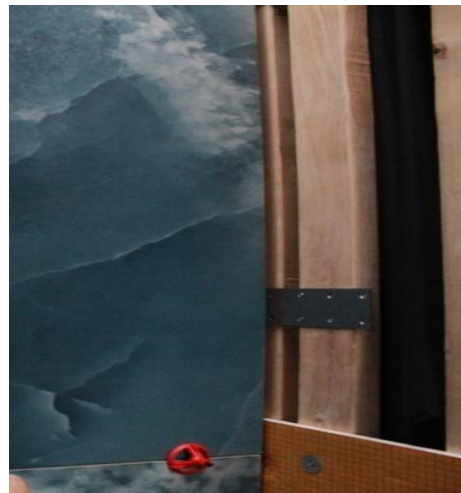
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## **CORRECTING YOUR FRAMING**

*Continued*



Example 1



Example 2

You can block for each of the backwall brackets individually as shown in example 1 or you can install a stud sideways to accommodate all the brackets as shown in example 2.

Make sure there is adequate framing to support the shower door.

Blocking may need to be added if you are installing a corner soap dish, grab bar or seat.

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## **ALTERING A PANEL**

Alter the Synthesis<sup>TM</sup> porcelain wall panels by cutting with a 5" angle grinder **USING A BLADE DESIGNED FOR CUTTING PORCELAIN**. See [Cutting a Panel](#) and [List of Tools and Supplies](#) for more information.

The panels may be cut either wet or dry; see [Read Me First](#) for additional information on dry cutting Synthesis<sup>TM</sup> porcelain composite panels.

### ***PRO TIP***

We do not recommend cutting panels where they meet at the horizontal seam or on the vertical front edges of the side panels. Factory edges produce the best edges and seams.

## **START BY FINDING THE HIGHEST POINT OF YOUR SHOWER BASE**

1. Using a spirit (bubble) level or a laser level, draw a level line around the perimeter of the shower 6" above the flange of the shower pan.
2. Measure down from your level line to your shower pan in all four corners of your shower to locate the highest corner and lowest corner of the shower pan. **Make note of the highest corner for future reference.**

## **ALTERING THE WIDTH OF A BACK WALL PANEL**

When altering the width of a back wall panel, either the left or right side of the panel may be cut. These edges will be concealed when the installation is complete.

The width of the back wall panel must always be 1-1/2" narrower than the width of the framing to allow for the installation of the seam and pan skirts on the side (return) walls.

*For Example: For a stud-to-stud measurement of 40", the back wall panel width must be 38-1/2".*

## **ALTERING THE WIDTH OF A SIDE (RETURN) WALL PANEL**

When altering the width of a side (return) wall panel, cut **ONLY** the 1-1/4" thick edge of the panel. Never alter the 3/4" thick edge of the panel, which is much more visible when the installation is complete.



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## **ALTERING A PANEL**

*Continued*

### **ALTERING THE HEIGHT OF A WALL PANEL**

#### ***PRO TIP***

Most installations will not require bottom panels to be reduced in height. Cutting bottom panels for height may result in uneven seams and will require resetting your vertical jig so should be done with caution.

All panels may be modified for height as follows:

- Up to 22" may be cut from the top edge of the top wall panel.
- Up to 5" may be cut from the bottom edge of the bottom wall panel.
  - Be sure to cut the same amount from the bottom of all wall panels to ensure alignment of the horizontal seam between the top and bottom panels.
  - The height of the provided moisture-resistant pan skirts may need to be modified to accommodate this modification.
  - Cutting from the bottom of a panel will change the heights at which brackets are installed on the studs and the locations where brackets are installed on the vertical jig.

#### ***PRO TIP***

The most accurate method of determining the height of a top wall panel is to install the bottom panel and the lippage control spacers, measure from the ceiling to the spacers, and deduct 1/16"

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## **ALTERING A PANEL**

*Continued*

### **FOR SHOWER PANS THAT ARE SIGNIFICANTLY OUT OF LEVEL**

1. Starting at your lowest point, cut the bottom edge of the bottom panel out-of-square to accommodate the difference between the highest and lowest points of your shower pan.
  - This modification **MAY** require altering all of the bottom panels in the Synthesis<sup>™</sup> system.
  - This modification **WILL** require the brackets on your vertical jig to be reconfigured. See [Setting up the Vertical Jig](#) in these instructions for more information.

## **CUTTING A PANEL**

Alter the Synthesis<sup>™</sup> porcelain wall panels by cutting with a 5" angle grinder **USING A BLADE DESIGNED FOR CUTTING PORCELAIN**. See [List of Tools and Supplies](#) for more information.

The panels may be cut either wet or dry; see [Read Me First](#) for additional information on dry cutting Synthesis<sup>™</sup> porcelain composite panels.

1. Carefully lay out the location of your cut on the face of the panel and mark the line with a pencil.
2. Apply painters tape on the PANEL SIDE of the cut with the edge of the tape aligned with your pencil line.
3. Use your 5" angle grinder to cut the panel approximately 1/16" away from the edge of the tape.
4. Use your angle grinder base attachment and 50-grit stone polishing pad to grind the edge back to the tape line. This method will remove any small chips that may have occurred and result in a perfectly smooth and even cut.
5. See the Snippet Video (Cutting a Panel) on our [YouTube](#) channel.

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## INSTALLING THE BACKWALL BRACKETS

Each back wall panel will have 4 backwall brackets.  
These brackets will be placed on the top and bottom track of each panel.



Measure the distance between the studs at the rear of the framing, this will determine how to set the backwall brackets.



The backwall bracket will come pre-assembled.

Install the backwall bracket by sliding the T-slot washers into the track.

The distance between the 2 backwall brackets should equal the distance measured earlier minus 1/16" on each side.

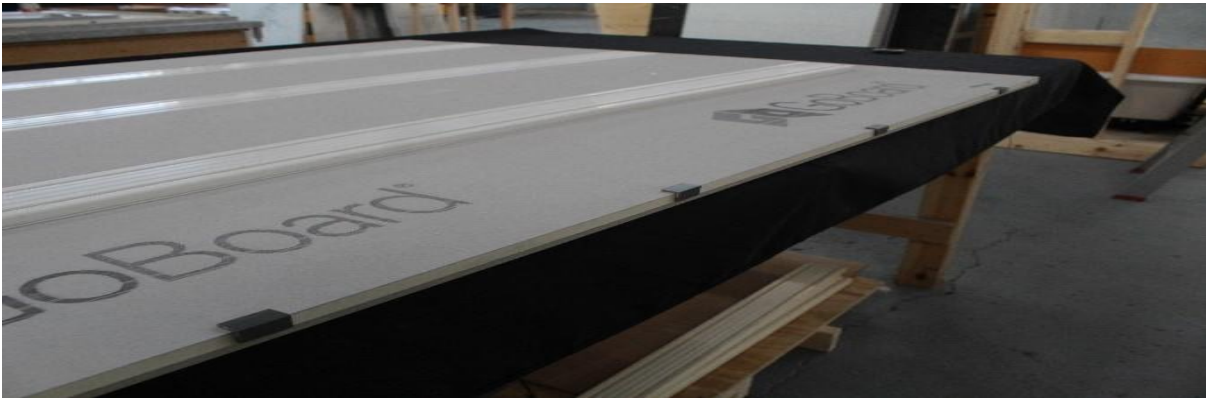


Use a carpenter square to square the bracket to the track.

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## **TEST FITTING THE BACK WALL**

Install (4) spacers on the bottom panel of the back wall.  
\*\*This will be the only panel that will have spacers installed.



Install both the bottom skirt and seam skirt for the back wall  
Install the bottom backwall panel.  
Use a bubble level to make sure it is plumb.  
Place a screw in each bracket to secure the panel to the return walls.



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## **TEST FITTING THE BACK WALL**

*Continued*

Place four lippage control spacers on the top edge of the bottom panel.

Cut and fit the top panel for the back wall of the shower. Rest the bottom edge of the top panel on the lippage control spacers at the top of the bottom panel.



Use a bubble level to make sure it is plumb.  
Place a screw in each bracket to secure the panel to the return walls.

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## **SETTING UP THE VERTICAL JIG**

Place (2) side wall panels facing down on a flat soft surface.

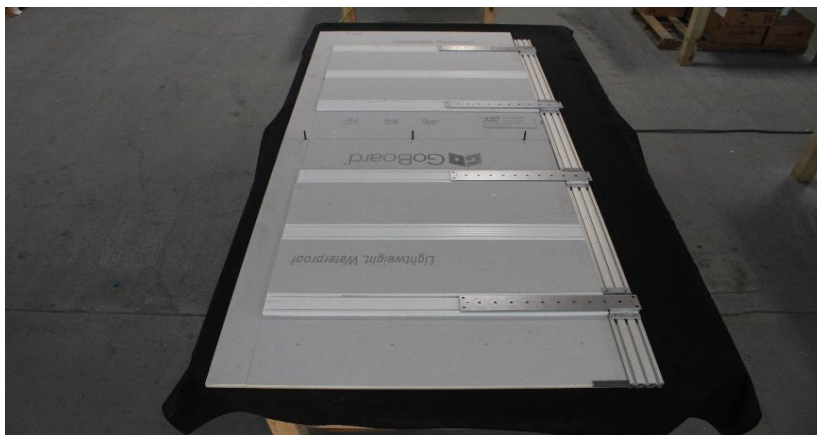
Place lippage control spacers between panels at the center seam.

Lay the vertical jig next to the laid-out panels and loosen all the hardware.



Place the appropriate backwall bottom panel spacer at the bottom of the panel and align the jig such that it overhangs the bottom of the bottom panel and flush with the spacer.

Place the sidewall bracket in the track on the back of the panel making sure you have good Engagement.



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## **SETTING UP THE VERTICAL JIG**

*Continued*

This is an example of bad and good engagement.



Bad Engagement



Good Engagement

Starting from the bottom of the panel, engage the bracket into the track and tighten the jig hardware.

Repeat this step for the remaining brackets.

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## **TESTING THE SEAM LINE UP**

With the back wall test fitted we can now determine if the return wall seams will line up with the backwall seams.

Place a return wall seam skirt on the return wall so that the center is at 47 ¼" from the shower pan. Temporarily tack it to the stud with 2 screws and washers.  
(This will allow you to clamp the vertical jig on it.)

Place the jig with the side wall brackets attached in the middle of the wall making sure you will be able to screw into at least 2 studs.





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## **TESTING THE SEAM LINE UP**

*Continued*

**NOTE:** We will only be installing the bottom sidewall bracket on the 2 return walls.



Mark the center of the hole in each location where you will screw the bracket to the stud.

Mark, all 4 brackets.



On the bottom bracket drill a pilot hole using a 3/32 Drill bit.



Install the bottom bracket using the provided # 8 screws.

Repeat this process for the other return wall.

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## **TESTING THE SEAM LINE UP**

*Continued*



Before doing the test fit for the side wall panels, be sure to install closed cell foam to the side of panel. See [Test Fitting the Return Walls](#) for more information.

Engage the bottom panel track to the bottom sidewall bracket.

To check engagement, you can hold the panel to the return wall and pull the bottom of the panel toward you using a suction cup.



Make sure the seams line up at both the bottom of the panel and at the top of the panel. (you should maintain a 1/8" grout line at the pan and center seam)

Do this for both return walls.  
If the seams do not match readjust accordingly.

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## **LABELING THE PANELS**

### ***PRO TIP***

All panels may be moved or rotated to achieve satisfactory pattern consistency. The 3/4" edge on the side panels **MUST** remain at the front of the shower and any desired panel rotation **MUST** be performed prior to any cutting or fitting.

### **BACK WALL PANELS MUST BE FITTED & INSTALLED BEFORE SIDE WALL PANELS**

Once the fit is satisfactory, **label all the panels and their orientation** to ensure they are installed in the correct location at the final installation.

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## **INSTALLING PLYWOOD STRIPS AT FRONT VERTICAL EDGES**

The 1/2" plywood pieces included in your Synthesis™ porcelain shower surround kit are to be used as backer pieces at the front of the shower to provide suitable attachment for shower doors. These pieces are to be attached to the doubled 2x4 wall studs on each side of the opening and behind the front edges of the Synthesis™ wall panels.

1. Place one of the 48" x 2" x 1/2" plywood pieces vertically on one side of the opening, against the doubled 2x4 wall studs, and resting on the flange (water dam) of your shower pan.
2. Attach the plywood using the provided 1-5/8" drywall screws. Use six screws per piece in a side-by-side format, placing two screws each at the top, middle, and bottom of the piece.
3. Place another plywood piece vertically on top of the piece that was just installed. If necessary, trim the length of the piece to fit your installation. Attach this second plywood piece using the provided 1-5/8" drywall screws in the same quantity and pattern as noted above in Step 2.
4. Using the same steps and methodology, repeat this process to install two plywood pieces on the opposite side of the shower opening.



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## **INSTALLING THE PAN AND SEAM SKIRTS**

**Start by installing the shower pan skirt on the back wall.**

1. Place a heavy bead of clear sealant on the bottom edge of the moisture-resistant shower pan skirt.
2. Place the shower pan skirt horizontally on top of the shower pan flange and attach the skirt to the wall studs using two rows of the provided screws and collars in each stud, one at the top of the skirt and one at the bottom.
3. Install the shower pan skirts on the left and right return walls using the same steps and methodology as above but trimming them to fit between the 1/2" plywood and the back wall pan skirt. Add a heavy bead of clear sealant on the back edge of the skirt where it abuts the pan skirt on the back wall.



**Once all shower pan skirts have been installed, continue by installing the seam skirt on the back wall.**

The center of the seam skirt is located 47-1/4" up from the threshold/panel ledge of your modular one-piece shower pan or from the floor of your tile-ready shower pan. This will ensure equal overlap behind both the top and bottom panels.

1. Attach the seam skirt horizontally to the wall studs using two rows of the provided screws and collars in each stud, one at the top of the skirt and one at the bottom.
2. Install the seam skirts on the left and right return walls using the same steps and methodology as above but trimming them to fit between the 1/2" plywood and the back wall seam skirt. Add a heavy bead of clear sealant on the back edge of the skirt where it abuts the seam skirt on the back wall.



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## **INSTALLING THE FLASHING**

**Start by installing the pan flashing.**

Use the 14ft length of flashing to flash the pan skirt to the shower pan flange from the left front of the shower all the way around to the right front of the shower using one continuous piece.



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**Continue by installing the vertical corner flashing.**

Use the two 10ft lengths of flashing to flash the two back corners of the shower.

Starting at the top of the wall, apply the flashing down each corner in *one continuous piece*, covering the center seam skirt and continuing over the shower pan skirt before finishing inside the flange of the shower pan.



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## **INSTALLING THE BACKWALL PANELS**

### ***ALWAYS START BY INSTALLING THE BOTTOM PANEL ON THE BACK WALL***

1. Apply a heavy horizontal bead of translucent adhesive/sealant on the face of the back wall shower pan skirt at 3" above the shower pan.
2. Apply a heavy horizontal bead of translucent adhesive/sealant on the face of the back wall seam skirt at 2" below the seam line.
3. Apply a 1/2" horizontal bead of 2-part epoxy adhesive on the face of the back wall seam skirt at 1" below the seam line.
4. Push the bottom panel into place, lining up the screw holes from the test fit.



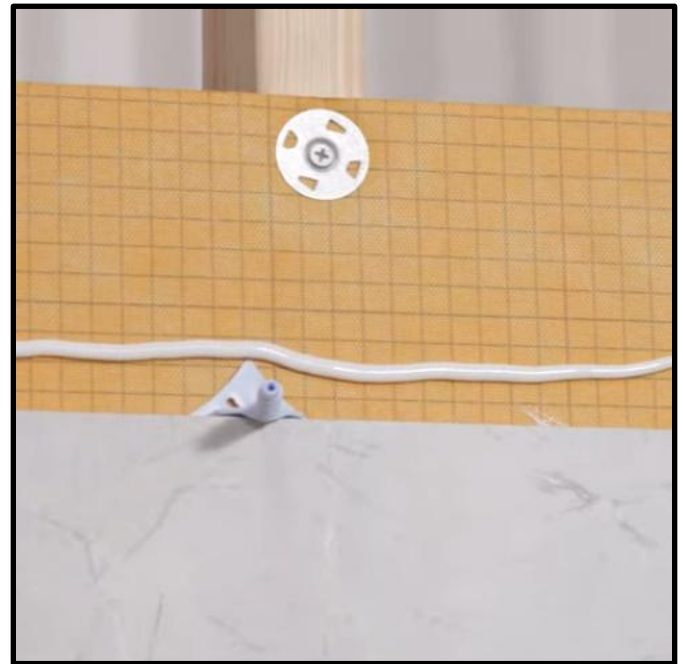


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## **INSTALLING THE BACKWALL PANELS**

*Continued*

5. Install lippage control spacers on the top of the bottom back panel.
6. Apply a 1/2" horizontal bead of 2-part epoxy adhesive on the face of the back wall seam skirt at 1" above the top edge of the bottom panel.
7. Apply a heavy horizontal bead of translucent adhesive/sealant on the face of the back wall seam skirt at 2" above top edge of the bottom panel.
8. Rest the bottom edge of the top panel on the lippage control spacers at the top of the bottom panel. Push the upper panel into place, screw your backwall brackets in using the same holes as the test fit. **\*\*Use a minimum of 3 screws.**



9. Tighten the caps on the lippage control spacers to remove any misalignment between the faces of the top and bottom panels.
  - Time is of the essence when working with the 2-part epoxy. To avoid potential misalignment on the face of the panels, make sure that all panels are installed and the lippage control caps tightened before the 2-part epoxy adhesive has cured.

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## **TEST FITTING THE RETURN WALLS**

With the back wall fully installed we can now test fit the side walls and install them.



Drill a pilot hole using a 3/32 Drill bit in the remaining marked holes.



Install the Remaining sidewall brackets using the provided # 8 screws.



It is now time to test fit and install the walls.

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## TEST FITTING THE RETURN WALLS

*Continued*

**This process will be done for each return wall.**

Apply the closed-cell foam weatherstripping to the back edge of all four return wall panels, **holding it back 1/8" from the face of the panel.**

- This weatherstripping will provide an additional seal behind the color-matched silicone sealant in the joint between the side wall panels and back wall panels.
- **BE SURE to push the side panel tightly against the back wall panel to ensure that the closed cell foam is fully and uniformly compressed.** This will ensure that this critical part of the water-proofing process will function as intended.

Using the same steps and methodology, repeat this process to apply the adhesives and install the panels on the right and left return walls.



Install the bottom panel first. Place the panel on the floor and lift 1/8" up and push the panel to the wall to engage the bracket.

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## **TEST FITTING THE RETURN WALLS**

*Continued*



Example A



Example B

Place the suction cup on the top half of the panel and pull towards you to feel if the panel is engaged with the sidewall bracket. (Example A)

Place the suction cup on the bottom half of the panel and pull towards you to feel if the panel is engaged with the sidewall bracket. (Example B)



Place lippage control spacers at the top of the bottom panel.

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## **TEST FITTING THE RETURN WALLS**

*Continued*



Using 2 suction cups lift the top panel and place it on the lippage control spacers.

Lift the panel up about 1/8" and push tight to the stud wall.

The panel will engage with the sidewall brackets and drop back down the 1/8".

Pull the upper suction cup towards you to make sure the panel is engaged with the sidewall bracket.

Pull the lower suction cup towards you to make sure the panel is engaged with the sidewall bracket.



Install lippage control post caps to ensure correct flatness.

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## **INSTALLING THE RETURN WALLS**

1. Apply a heavy horizontal bead of translucent adhesive/sealant on the face of the return wall shower pan skirt at 3" above the shower pan.
2. Apply a heavy horizontal bead of translucent adhesive/sealant on the face of the return wall seam skirt at 2" below the seam line.
3. Apply a 1/2" horizontal bead of 2-part epoxy adhesive on the face of the return wall seam skirt at 1" below the seam line.
4. Apply a heavy horizontal bead of translucent adhesive/sealant on the face of the return wall seam skirt at 2" above the seam line.
5. Apply a 1/2" horizontal bead of 2-part epoxy adhesive on the face of the back wall seam skirt at 1" above the seam line.
6. Install the bottom return panel the same as in test fitting.
7. Install lippage control posts.
8. Set top panel on lippage control posts and install the same as in test fitting.
9. Install the lippage control caps to ensure correct flatness.



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## **COMPLETING THE INSTALL**

Start by installing any accessories you must install. [See Installing your Accessories.](#)

Wait 30 minutes after the last panel was installed, then remove the lippage control caps from all panels. Use a utility knife to cut out the lippage control spacers on an angle so no part of the remaining spacer is protruding out of the seam.

Using the color-matched 100% silicone sealant, thoroughly fill and smooth the center seam, corner seams, and the seam between the bottom panel and the pan.

### ***PRO TIP***

It's always best to verify the color of the silicone sealant with the end user prior to installing it, as they may wish to use a color other than the one provided.

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## **INSTALLING YOUR ACCESSORIES**

The Synthesis™ porcelain shower surround system is compatible with a side variety of accessories, including shower shelves, shower niches, grab bars, and more!

***Shower Accessories MUST be installed AFTER Final Installation***

**In-wall blocking is required for any grab bars, shower seats, or any other accessory that may be subject to sudden or prolonged pressure in any direction.** The Synthesis™ porcelain shower wall panels do not provide sufficient support for these items.

When drilling holes through Synthesis™ porcelain wall panels, the hole must be a minimum of 1/8" larger in diameter than the fastener that is to pass through it. This is to avoid any contact between the fasteners or fastener threads and the porcelain.

### **Installing a Shower Niche**

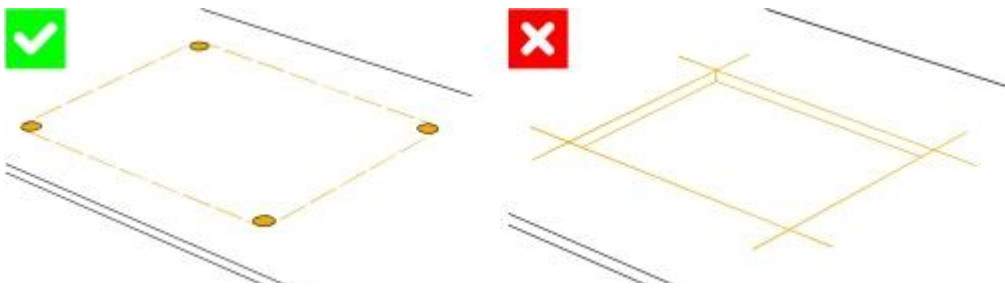
One-piece stainless "drop-in" shower niches are **HIGHLY RECOMMENDED** for use with the Synthesis™ porcelain shower surround system. Their seamless, leak-proof construction matches our obsession with waterproofing and helps us sleep better at night.

Prior to installing the panels, carefully measure and lay out the location of the niche and document. After Final Install transfer your measurements to the panel using painters' tape. Drill a 3/8" diameter hole at each corner of the cutout. Cut the opening in the panel using a 5" angle grinder equipped with a blade designed for cutting porcelain. The panel may be cut either wet or dry.

Seal the perimeter of your niche with clear sealant.

### ***PRO TIP***

Inside corners **CANNOT** be cut square on Synthesis™ panels. Corners must be drilled/radiused first and then connected by straight cuts.





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## **INSTALLING YOUR ACCESSORIES**

*Continued*

### **Installing a Surface-Mounted Shower Shelf or Shaving Shelf**

**Prior to installing the panels, install in-wall 2x wood blocking where needed and make note of blocking locations for future reference.**

Install the panels.

Measure and mark the location of the fasteners for your shower shelf, making sure that they align with the previously installed in-wall blocking.

Mark and drill holes for your grab bar fasteners using a drill bit designed for use with porcelain. The holes must be a minimum of 1/8" larger in diameter than your screws.

Install your grab bar, applying a small dab of clear sealant to each screw. Make sure that the screws are long enough to reach the in-wall blocking and DO NOT overtighten the screws.

***Ensure that the hardware provided is long enough to reach the blocking.***

### **Installing a Grab Bar and Folding Benches**

Prior to installing the panels, install in-wall 2x wood blocking where needed and make note of blocking locations for future reference.

Install the panels.

Measure and mark the location of the fasteners for your grab bar, making sure that they align with the previously installed in-wall blocking.

Mark and drill holes for your grab bar fasteners using a drill bit designed for use with porcelain. The holes must be a minimum of 1/8" larger in diameter than your screws.

Install your grab bar, applying a small dab of clear sealant to each screw. Make sure that the screws are long enough to reach the in-wall blocking and DO NOT overtighten the screws.

***Ensure that the hardware provided is long enough to reach the blocking.***



View our tutorial videos at [SynthesisbyPCS.com](http://SynthesisbyPCS.com)

## **CARING FOR YOUR SYNTHESIS™ PORCELAIN SHOWER SURROUND SYSTEM**

Your Synthesis™ porcelain shower surround is resistant to scratching, etching and stains, but it is not impervious to damage. Keep your Synthesis™ porcelain wall panels looking great by performing regular, basic cleaning with warm water and mild soap or a neutral, pH-balanced cleaner. You may use a gentle multipurpose spray cleaner to remove soap scum, hard water deposits, and mildew. Using a squeegee after each use can help minimize build-up. Do not use cleaning products that contain abrasives, acids, ammonia, or harsh chemicals as these may damage the finish on the surface of the panels.

### **SYNTHESIS™ WARRANTY**

We provide a robust 10-year product warranty on the Synthesis™ vitrified porcelain panel against material and manufacturing defects under normal use and service. Panel Composite Systems, Inc. warrants to the original end-user that we will repair or replace, at our option, any product found to be defective under normal use and care at no charge for a period of ten years from the date of purchase. This warranty covers the product only and does not cover the labor to remove or reinstall the product.

A manufacturing defect is defined as a shortfall in the product to perform within manufacturer's specifications and industry allowable tolerances as set forth by the Tile Council of North America (TCNA) and the American National Standard Institute (ANSI).

Variations in the following characteristics do not constitute a defect: color, shade, grain, movement, surface texture and finish.

Slight imperfections, presence of small drops of glaze on the surface of the slabs, chromatic and/or gloss differences between the material samples or the images and the product delivered *are NOT* manufacturing defects.

Natural occurring variations in color, background tone and particle structure within the panels are manufactured from natural materials and are unique in their composition. Certain levels of spots or blemishes are inherent in the manufacturing process and do not affect the structural integrity of the material and are *NOT* considered to be manufacturing defects.

Synthesis reserves the right to discontinue or modify any of its products and shall not be liable if replacement material varies in color intensity, hue, or shade in comparison to the original product. There will be no other form of compensation.



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### **SYNTHESIS™ WARRANTY**

This Warranty does not cover:

- Minor conditions such as stains, scratches, chips, water spots and burns
- Mishandling or abuse of the products
- Structural design issues
- Failure of joints or seams or of any adhesive, sealant, or other accessory
- Failure to comply with Panel Composite Systems' Installation Instructions
- Poor installation practices or defects in installation
- Use for purposes other than normal interior use in the United States or Canada
- Any products moved from their original place of installation
- Any factors beyond the control of Panel Composite Systems, Inc

PANEL COMPOSITE SYSTEMS' OBLIGATION UNDER THIS WARRANTY IS LIMITED TO THE REMEDIES SPECIFIED IN THE FIRST PARAGRAPH OF THIS WARRANTY. NO IMPLIED OR EXPRESS WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR ANY OTHER WARRANTY EXCEPT THOSE SPECIFICALLY STATED IN THIS WARRANTY OR REQUIRED BY LAW IS GRANTED. EXCEPT FOR THE REMEDIES DESCRIBED IN THIS WARRANTY, PANEL COMPOSITE SYSTEMS HAS NO LIABILITY FOR ANY LOSS OR ANY DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SYNTHESIS™ PRODUCTS.