

INSTALLATION GUIDE

STANDARD AND CUSTOM SURROUNDS



WARNINGS, CAUTIONS & NOTES

All informational and installation documentation contains warnings, cautions, and notes as needed.



A warning will be provided to inform the reader of a hazard that could cause death or personal injury of any degree. The warning will be worded clearly and will be placed immediately before the text that refers to the hazardous condition.



A caution will be provided to inform the reader of a hazard that could cause damage to DeVinci Cast Stone products and/or the home or facility in which they are being installed. The caution will be worded clearly and will be placed immediately before the text that refers to the hazardous condition.



A note will be provided to give the reader information that needs to be separated from the general text for emphasis. The note will be worded clearly and will be placed near the text that requires clarification.

TRANSPORTATION DISCLAIMER

Receiving Shipment

The utmost care is taken at our factory to protect the integrity of our shipping crates and the fireplace components within. Should the shipping container be damaged in transit, you must be prepared to capture photo documentation of the damage prior to opening the container as well as the condition of its contents prior to signing for receipt of the shipment. Signing for receipt of damaged shipping containers and their contents would release both the shipper and DeVinci Cast Stone for responsibility of any damage that has occurred. Once off the transport, safeguarding the containers and their content becomes the responsibility of the owner.

Uncrating Product - Time Constraints

Within twenty-four (24) hours of signing for receipt of the fireplace, it must be uncrated and all contents inspected for damage. During the uncrating process, care must be taken to protect the integrity of the shipping crate and contents. Should any damage be identified, DeVinci Cast Stone must be notified within twenty-four (24) hours of signing for receipt. Such notification must include photographic evidence of damage(s) along with photographs of the crating and packing components.

Failure to notify DeVinci Cast Stone of damage within the identified period releases DeVinci Cast Stone from any responsibility for damages during the preparation and shipping processes. Should any damages be identified outside the above parameters, DeVinci Cast Stone will work with the shipping recipient in the most expeditious manner to bring resolution to the identified issue(s).

INSPECTION OF CONTENTS



Some fireplace components are heavy and unwieldy; care must be taken to assure personal safety during the unpacking and inspection process.



DeVinci Cast Stone products are thoroughly inspected and carefully packaged for shipment. Care must be taken during the unpacking process to assure that components do not strike one another, which could cause chipping or abrasion

Unpacking Crate

1. Carefully remove top panel of packing crate.
2. Locate and remove packing list for use with inventorying crate contents.
3. Carefully remove formed foam protective packaging, assuring that fireplace components do not shift or collide.
4. Carefully remove packing crate sides as necessary during the inventory and inspection process, assuring that contents do not shift.
5. Remove all fireplace components, positioning them separately on clean, level surfaces.
6. Inventory all crate contents using the packing list. Carefully inspect all contents.
7. Should any deficiencies or damages be identified, notify DeVinci Cast Stone within twenty-four (24) hours of signing for receipt of shipment via phone (405-768-1085) and/or email (mail@devinciprecast.com).



Crate appearance upon arrival



After lid removal



Removing foam



Crate after foam removal

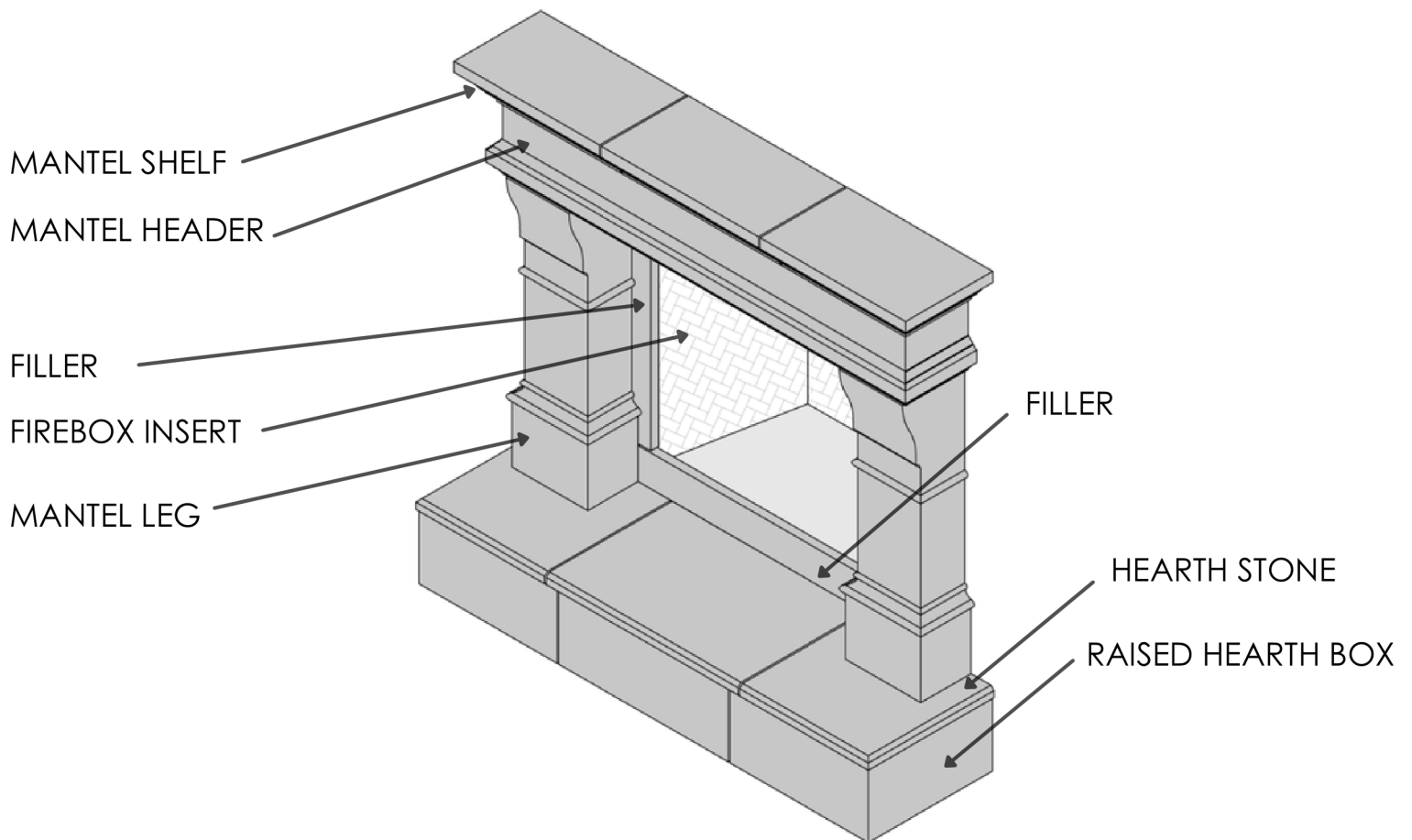


Disassembly of crate



Palletized stones to inspect

ANATOMY OF A FIREPLACE



INSTALLATION TOOLS & SUPPLIES

DeVinci-Provided	Installers-Provided	Suggested
Grout mix (dry)	Tape measure	Basic hand tool set
Polyplex	1/4" DIA. x 1" Self-drilling screws	Rubber gloves
5 Gallon bucket	Impact drivers w. #2 Phillips bit	Sponge
Plastic grout bag	Power drill	Mason's horsehair brush
Spacer sets / shims	3/16" Masonry drill bit	Grout mixing paddle
Mounting brackets:	Levels (2' x 4')	Stud finder
J-01 clips (varies)	Mortar pointing tools	Safety shoes, gloves, & glasses
J-02 clips (varies)	Blue painters' tape (2")	1/4" DIA. dowel pins
Z-01 clips (varies)	Caulking gun / Paintable Caulk	3/16" metal drill bit
L-01 clips (varies)	Tapcon Fasteners (1/4" x 1-3/4") & (1/4" x 2-1/4")	Toggle-lock heavy duty drywall anchors
	Construction adhesive (ex. Thinset, Liquid Nails)	Drop cloths or other floor protection



Some of our mantel assemblies will come with pieces that need to be cut to fit. If this applies to your surround, you will need a standard tile or circular saw equipped with a continuous rim diamond blade & an *****OSHA APPROVED DUST MASK.*****



Some DCS mantel kits come with oversized filler panels. If cutting is required, extra care should be taken to follow safety guidelines. Dust masks, skin coverings, and eye protection should be worn at all times.

*****OSHA APPROVED DUST MASKS SHOULD BE WORN BY ALL PERSONNEL IN THE VICINITY OF ANY CUTTING OF PRECAST ITEMS.**

Additionally, all dust should be thoroughly cleaned up with shop vacs using OSHA approved filters to prevent inhalation of latent dust by others during construction or at cleanup. Some project sites may require the use of wet saws for any cutting of concrete. OSHA jobsites will require compliance with "29 CFR 1926 OSHA Construction Industry Regulations; paragraph 55". It is the responsibility of the installer to provide a safe workspace for all.

INSTALL SITE PREPARATION

There are a few things to go over before it is time to install the mantel components.

1. Check that wall face is level vertically and horizontally.
2. If a hearth is to be used, consult the dimensions on your install sheet and outline the perimeter of the hearth on your floor. Check that floor in hearth area is level from left to right and from the wall face 20".
3. Check that firebox face is flush to wall face.
4. Note any variances, as they may need to be accounted for later in the process.
5. Mark the centerline of the firebox in pencil above (and below if applicable) on the wall.
6. In pencil, mark the center of all studs located within the install area.
7. Cover surrounding areas to protect them during the process. Grout can cause staining & dust may collect.



If the floor is not level, use varied heights of spacers below the hearth base along the length of it to bring it to level. The hearth base must be level to ensure the mantel is level. All designs account for a 1/4" joint beneath the hearth for levelling.

Depending on the severity, if the face of wall is not plumb, you may want to consider adding material to bring it to plumb.

MOST COMMON MISTAKES

Before beginning installation, please take a moment to review some of our recommendations to avoid the most common installation mistakes. This section will help you know what to look for as you move through the installation process to achieve the best possible results.

1. RUSHING GROUT – Grouting is perhaps the most important step in our installs. We have created a detailed grouting instructions guide which is full of helpful guidelines for mixing the grout to the proper texture and applying with the best method. Please read this section thoroughly and follow all instructions when you reach this phase.

2. IGNORING JOINT SPACES ASSUMED BY DEVINCI - Proper joint spacing is crucial to fit and alignment of your jobsite with our surround. All separated components should have a 1/4" space between them. This includes beneath the hearth and between the hearth top and filler base. If these joints are omitted, the entire surround is shifted down and is no longer in alignment with the design plan provided by DeVinci.

3. IGNORING LEVELLING STEPS – It is advised that you check that all mantel components are level before moving onto the next phase. Unlevel surfaces will become more and more uneven as the mantel height increases. By checking before moving onto the next phase, you eliminate the possibility of having to undo past steps to re-level.

4. WAITING TO WIPE UP EXCESS GROUT – during grouting phase, grout mix may splatter or fall onto stone surfaces where grout is not intended. If left for too long, it can cause discoloration. Wipe away any excess or splattered grout with clean water as soon as you notice it.

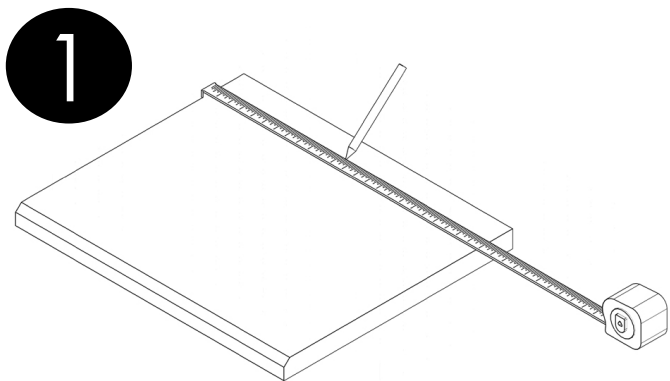
***If all instructions are followed carefully and the above warnings are considered, the installation process should be seamless, and result in an attractive final product.

PHASE 1: HEARTH INSTALLATION

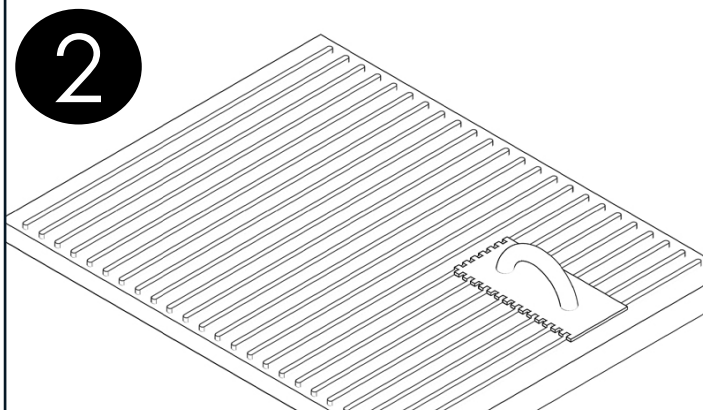
Many of our mantel kits are shipped with a three-piece hearth, depending on the customers desired application. The following steps will detail how to install our hearth (if one is used in your design). If a hearth is used, follow the instructions below for placement. If a hearth is not used, skip ahead to filler installation on page 8.



Fireplace codes generally require that combustible materials (wood flooring, carpeting, etc.) shall be a minimum of twenty inches from the face of the firebox. DeVinci's 20-inch hearths are designed to meet or exceed these requirements. The installer is responsible for adhering with local requirements and those specified by the firebox manufacturer.



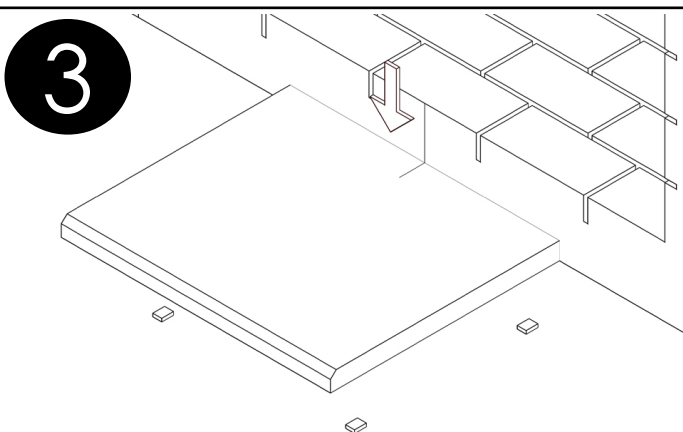
Find and mark the centerline of the middle hearth stone. Make only a small, light mark towards the back of the piece.



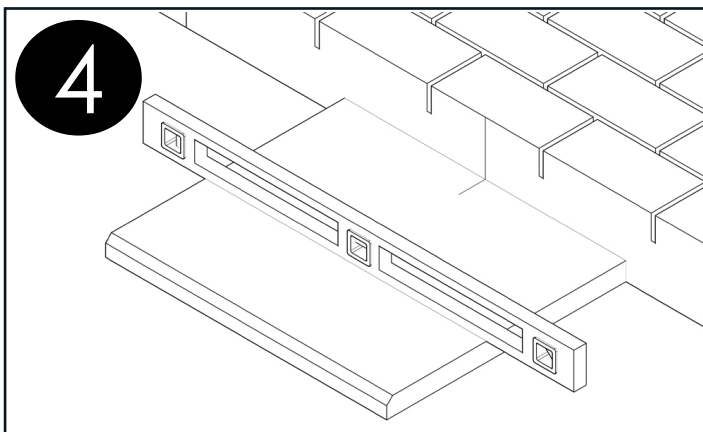
Apply a layer of construction adhesive to the bottom side of the stone. Thinset would be best for this application.



Some of our mantel assemblies will come with pieces that need to be cut to fit. If this applies to your surround, you will need a standard file or circular saw equipped with a continuous rim diamond blade & an OSHA APPROVED DUST MASK.



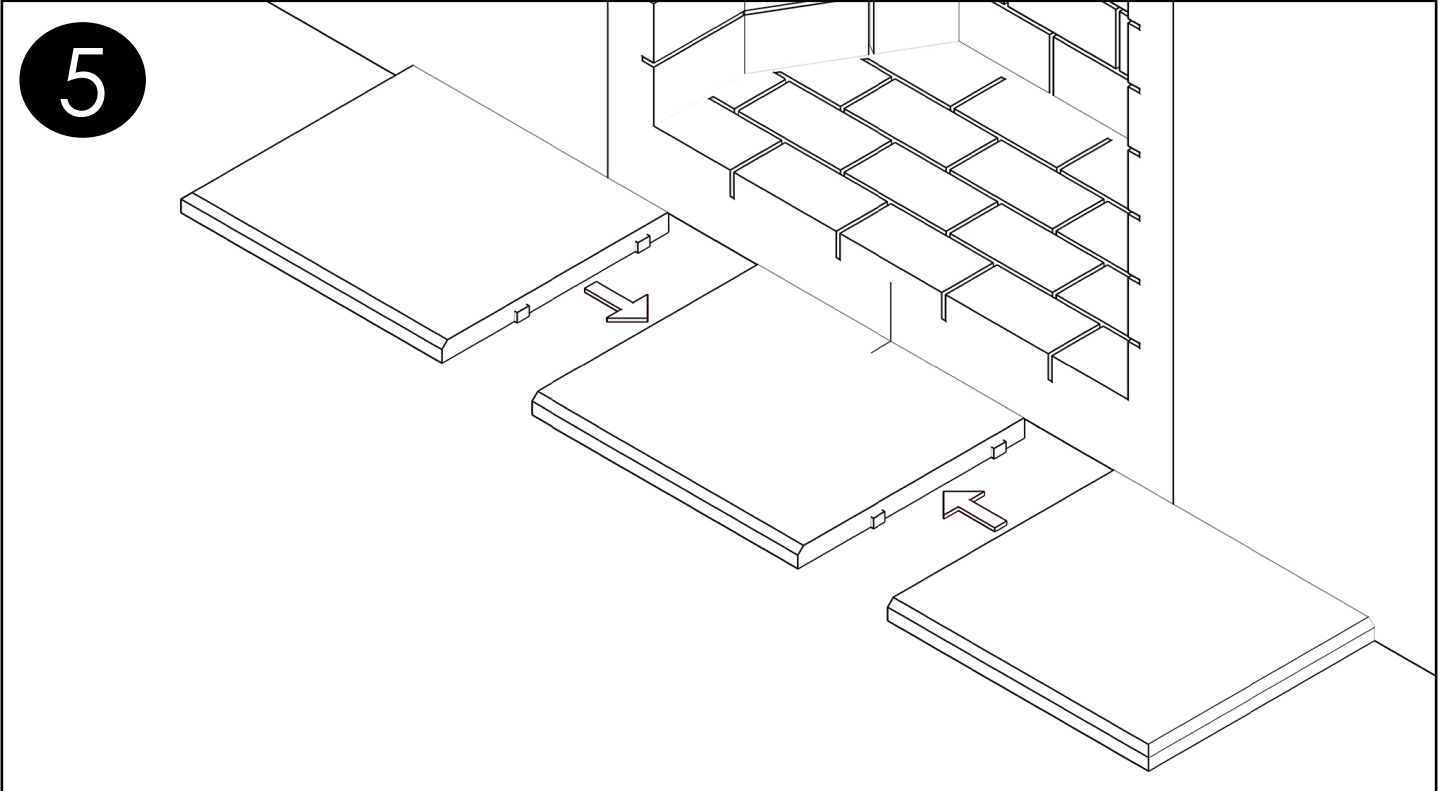
Place 1/4" spacers (4x). Place center hearth stone on floor, aligning its center mark with the center mark on the wall.



Once positioned, check that the center hearth stone is level in both directions. Add shims as needed to bring it to level.

HEARTH INSTALLATION

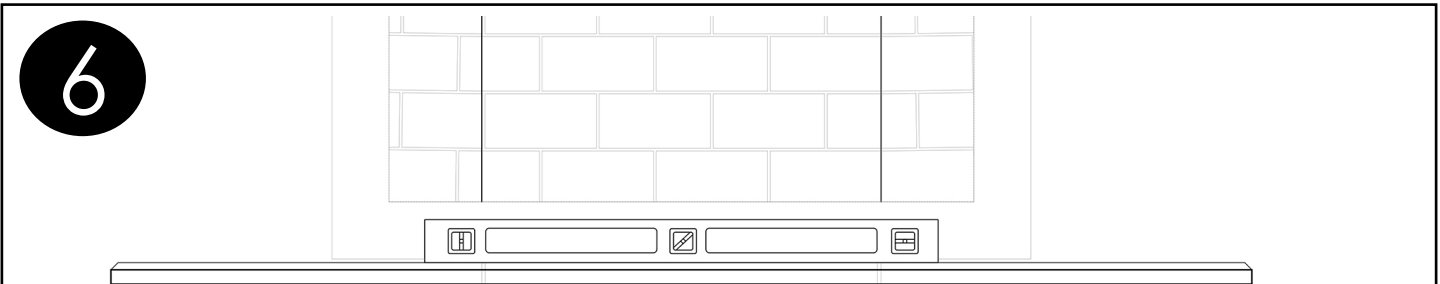
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After applying mastic, place the left and right hearth stones with their edges 1/4" from edge of middle stone (using spacers). Use spacers underneath as needed to bring the side hearth stones to level with the center stone.



Remember 1/4" space MUST be used under entire hearth. This joint is crucial to proper fit with your DeVinci surround.



Check that full hearth is level left to right and front to back. If so, move on to filler installation.

PHASE 2: FILLER INSTALLATION

One of the unique features of our mantel kits is that the legs and mantel overlap the filler panels. This allows for easy adjustments and flexibility during installation.

Our Fast Favorites kits come with oversized filler panels that will need to be cut prior to installation. Refer to our cutting worksheet for instructions on determining cut lengths.



If cutting is required, always wear eye, hand, skin, breathing, and hearing protection appropriate for the procedure being performed. Due to silica considerations, an N95 or better respirator must be worn when sawing concrete.

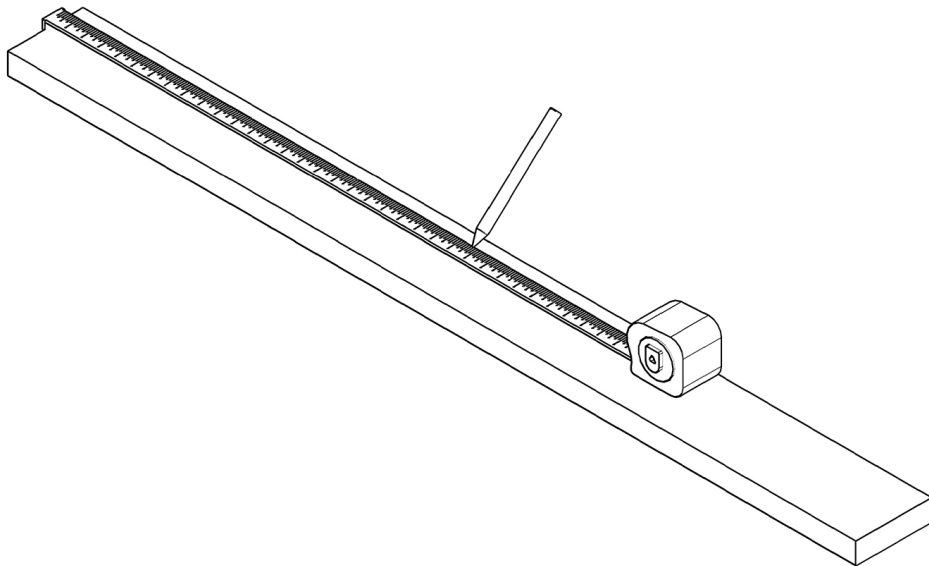


A caution will be provided to inform the reader of a hazard that could cause damage to DeVinci Cast Stone products and/or the home or facility in which they are being installed. The caution will be worded clearly and will be placed immediately before the text that refers to the hazardous condition.

Our surrounds are installed from the bottom up. After the hearth, the next piece installed will be the bottom filler. If a bottom filler is not used, the next pieces installed will be the side fillers.

Please refer to your setting drawings for clip placement suggestions.

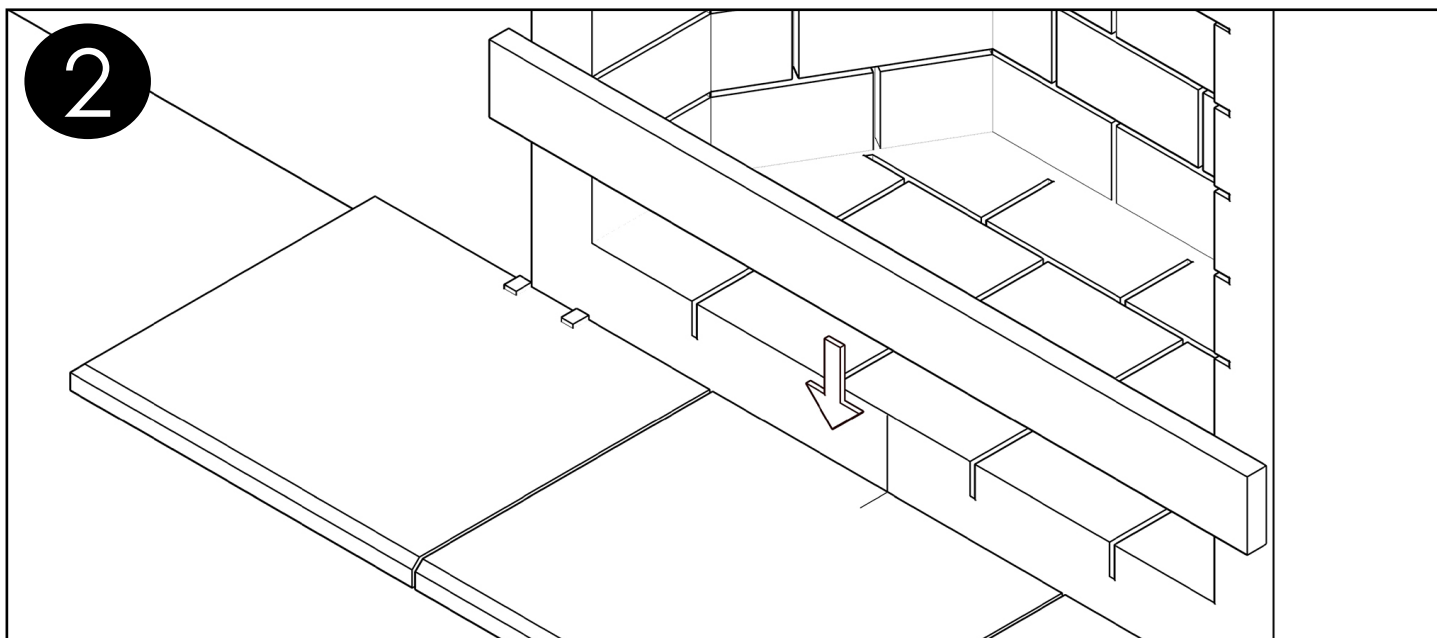
1



Locate and mark the center of the bottom filler panel lightly in pencil.

FILLER INSTALLATION

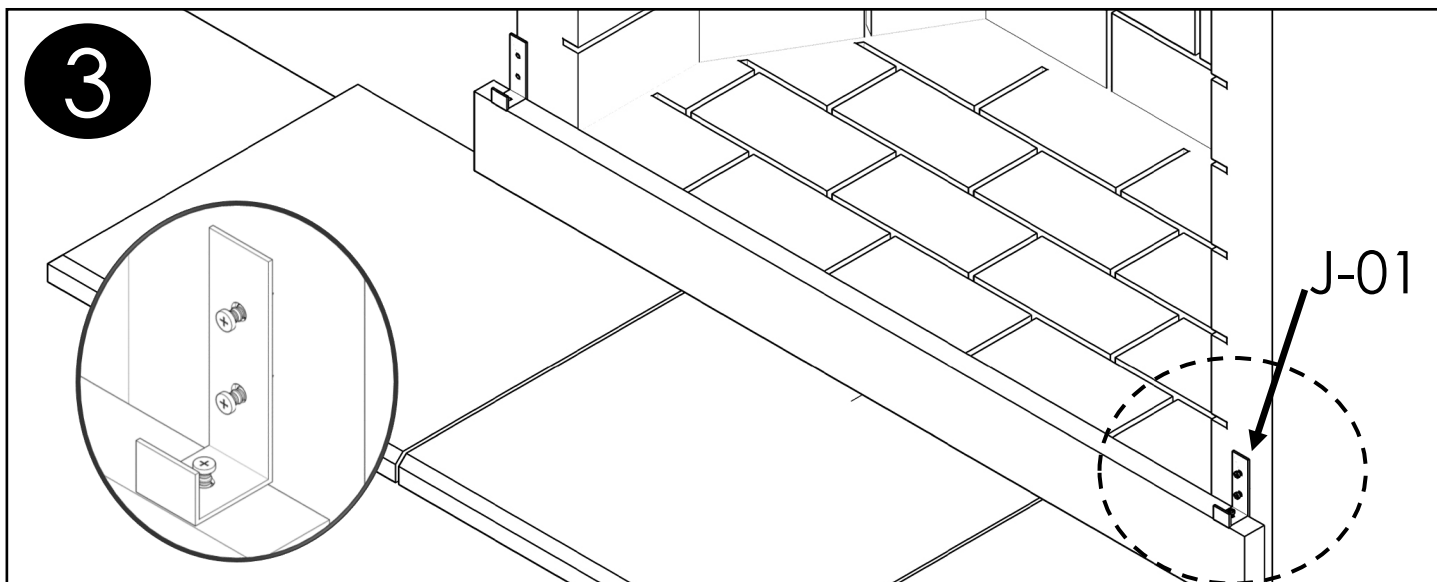
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- Position 1/4" of spacers on the hearth or floor below the outer edges of the firebox.
- Apply mastic to the back of the filler panel and to the surface it will sit on.
- Align the center mark on the filler panel with the centerline scribed on the wall or hearth.
- Set it on top of the spacers positioned earlier and press the panel against the wall.
- Check and adjust level as needed.



Wall brackets must always be located so that they will be completely covered by later pieces. They are secured to the wall using a Tapcon at a stud point or with a toggle lock heavy duty drywall anchor.



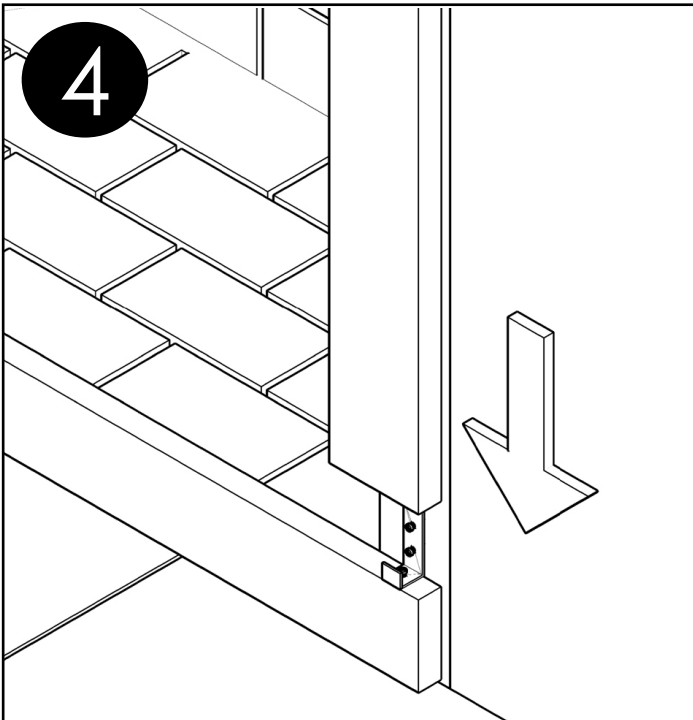
Secure the panel to the wall at its farthest possible outer edges (no less than 1" from edge) using the smaller J-02 brackets secured into a stud.

FILLER INSTALLATION

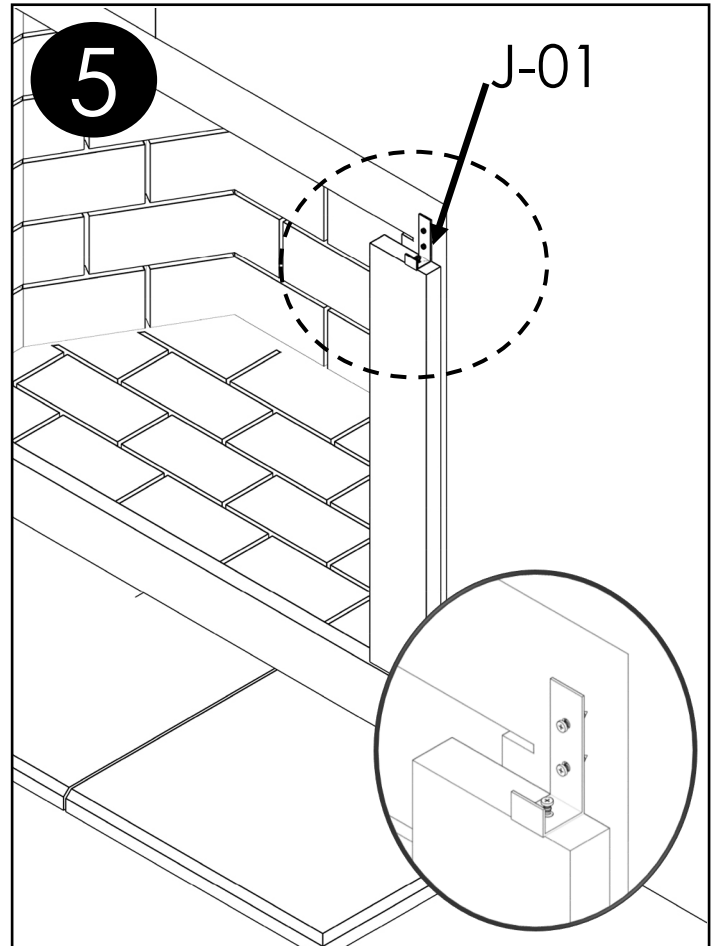
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Reference your setting drawings to determine whether side fillers should overlap $\frac{1}{2}$ " past the firebox opening or set back $\frac{1}{4}$ " away from it. If needed, side fillers can be shifted left to right to give a smaller or larger firebox reveal.



- Place $\frac{1}{4}$ " grout spacers near the J-01 bracket. Apply mastic to the back of one of the side filler panels.
- Place one of the side fillers with its' inner edge in correct position to the firebox, placing it inside the J-01 bracket used to fasten the bottom panel and on top of the spacers.



Check and adjust level as needed and secure the panel to the wall at its top edge using a J-01 bracket drilled into a wall stud.

REPEAT STEPS 4 & 5 TO INSTALL OTHER SIDE FILLER

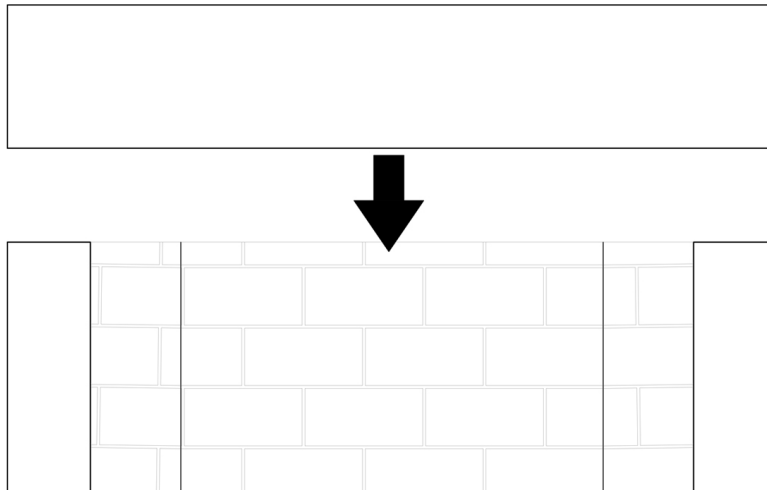


It is important to make any necessary adjustments to assure both side filler panels are plumb and level with each other and across their faces. Any adjustments must be made before moving onto top filler installation.

FILLER INSTALLATION

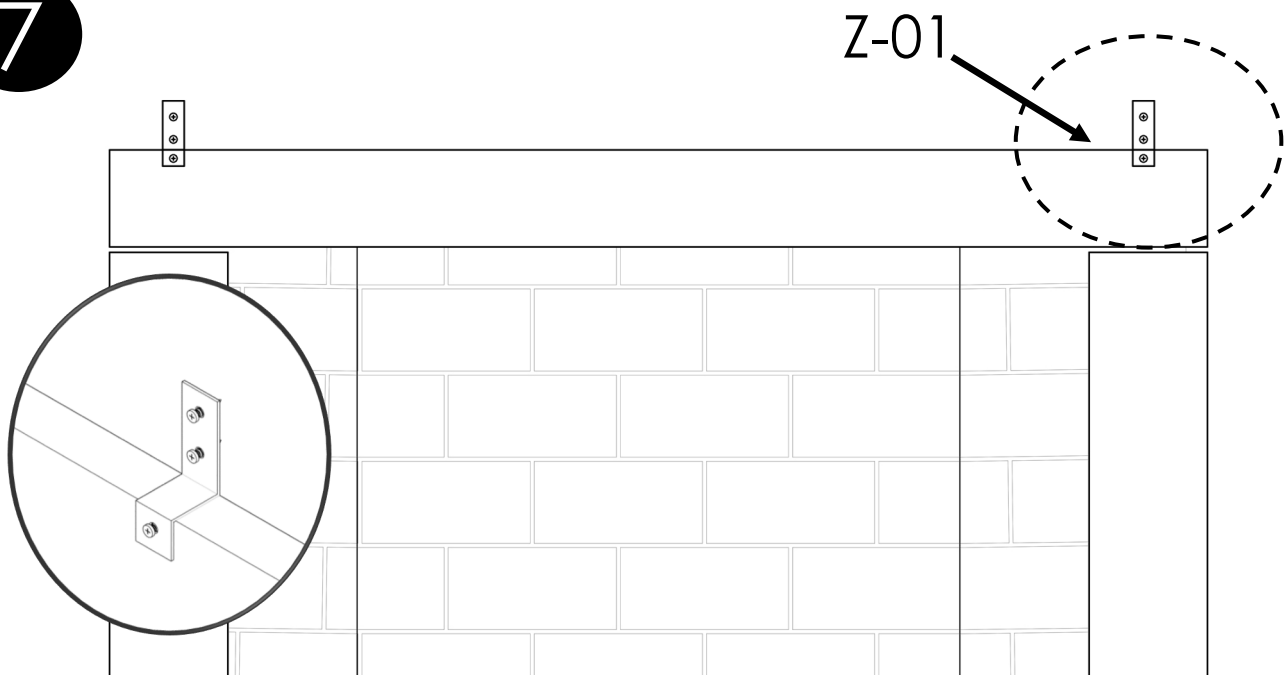
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6



- Mark the center of the top filler on its top edge.
- Position 1/4" of grout spacers and mastic on top of both side filler panels near the J-02 brackets.
- Apply mastic to the back of the top filler panel.
- Align its center with the centerline on the wall. Position it on top of the spacers and inside the J-01 brackets used to secure the tops of the side filler panels.

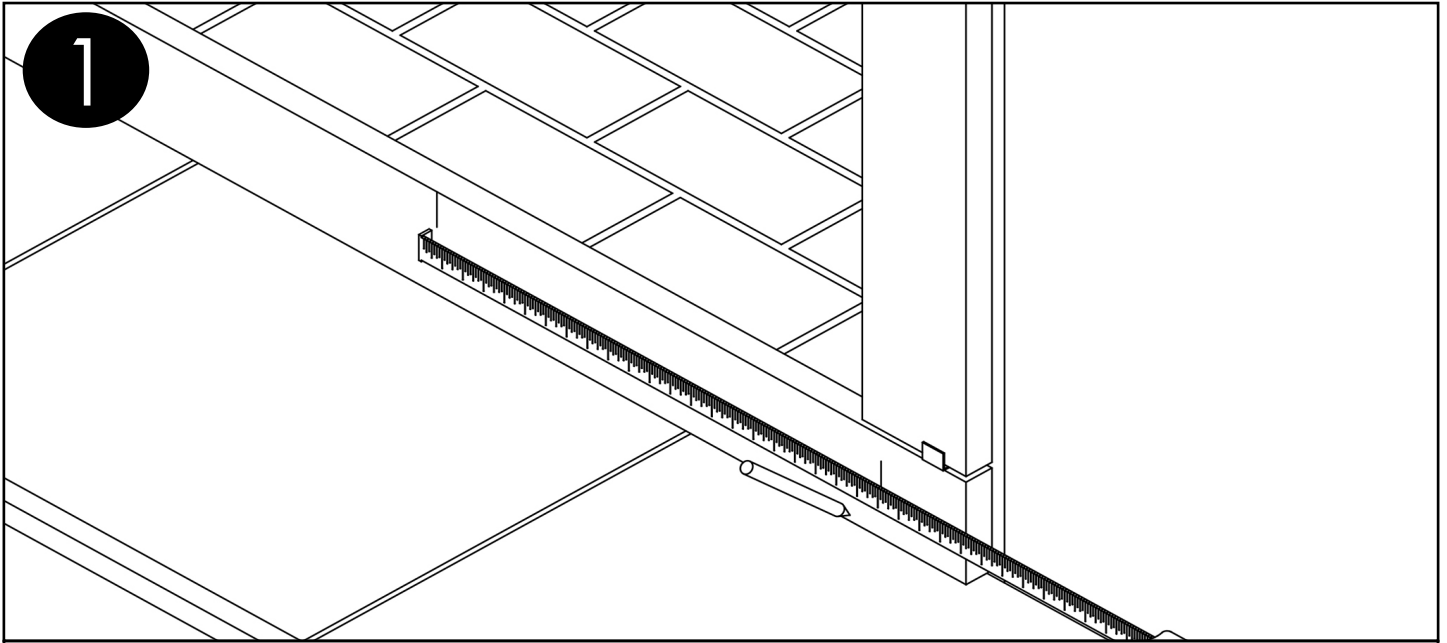
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- Check and adjust level as needed and secure the panel's top edge using two Z-01 brackets.
- Clean any extraneous mastic off installed panels.

PHASE 3: MANTEL LEGS INSTALLATION

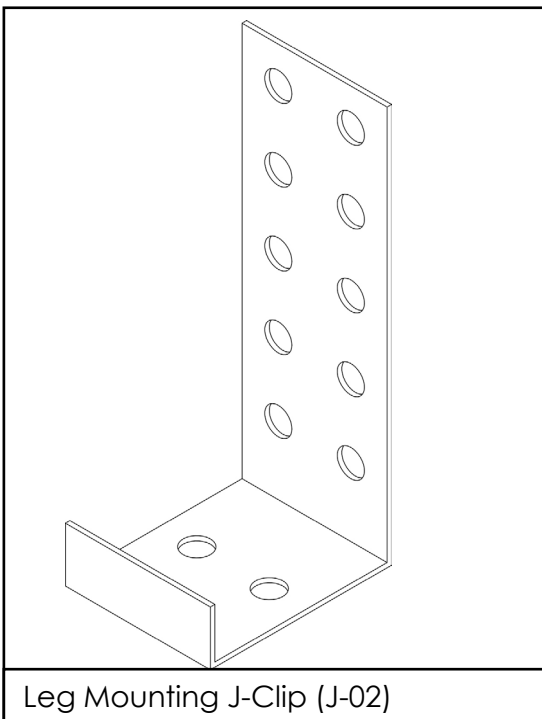
After all fillers have been installed, the mantel legs will be placed. Refer to the setting drawings that were included in your shipment for placement of mantel components.



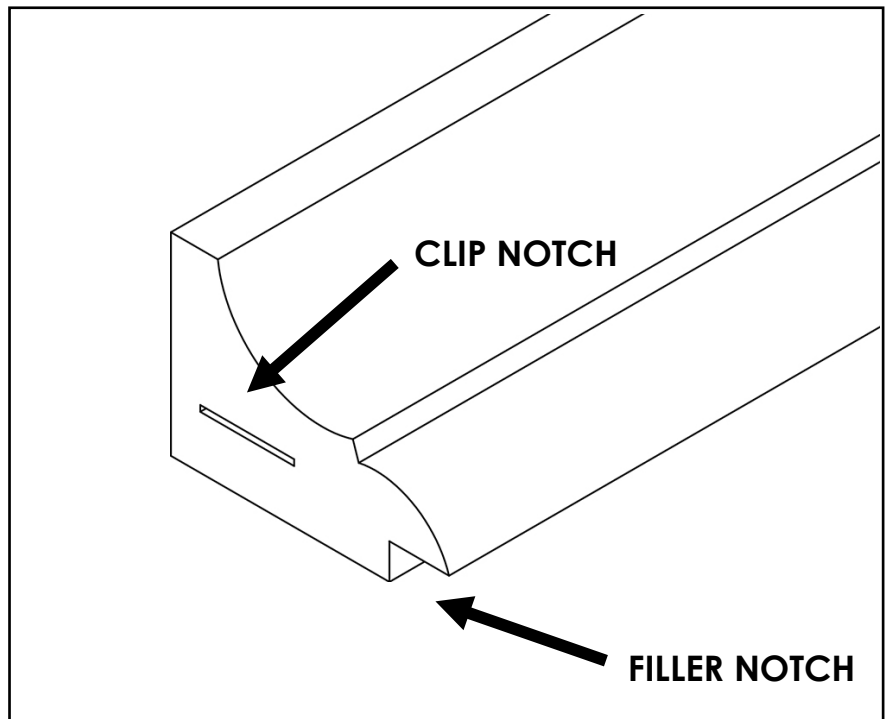
Referring to the installation setting drawings, lightly mark the side fillers and hearth in pencil to identify the locations of the inside edges of the legs.



DeVinci's mantel legs have notches in their bases to allow for the toe end of a J-02 bracket to slide into place. These notches are typically 2-4 inches wide, which provides some adjustability for the location of the bracket.

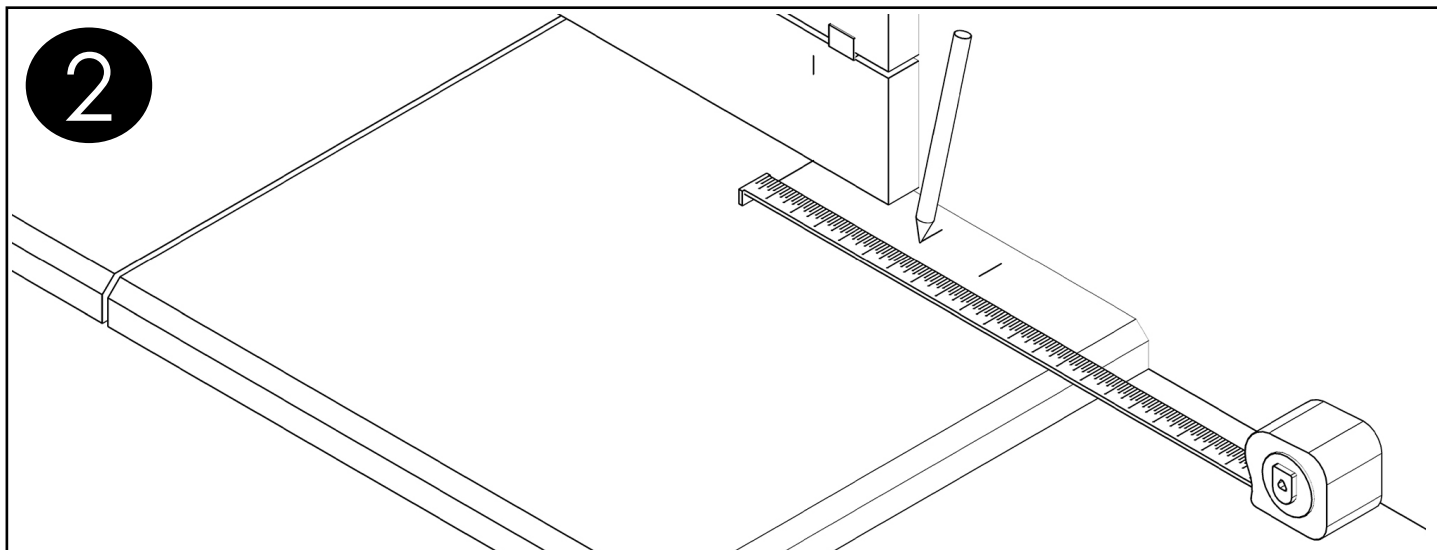


Leg Mounting J-Clip (J-02)



MANTEL LEGS INSTALLATION

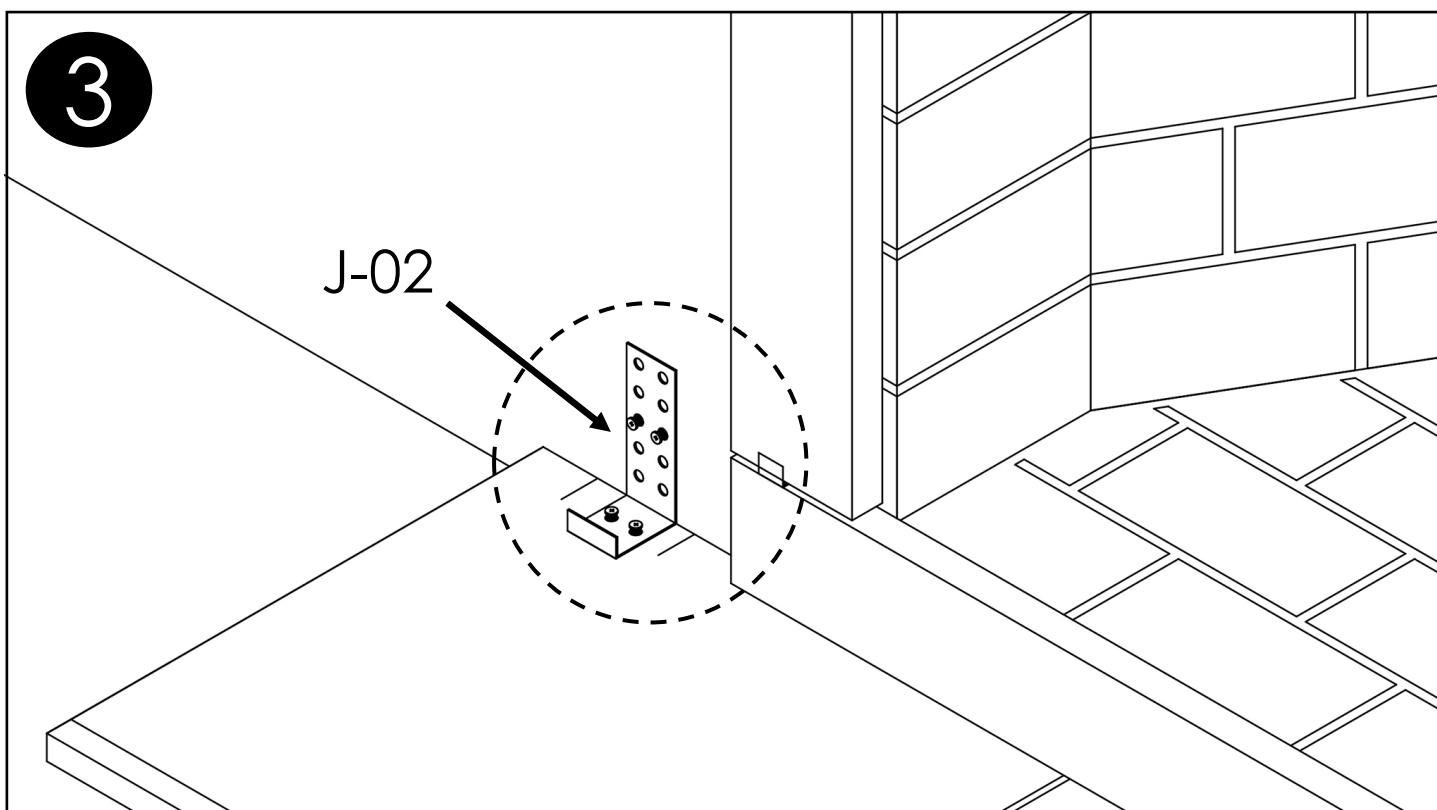
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Referencing setting drawings, mark the hearth or the floor near the wall on both ends to signify the location and length of the clip notches in the base of mantel legs.



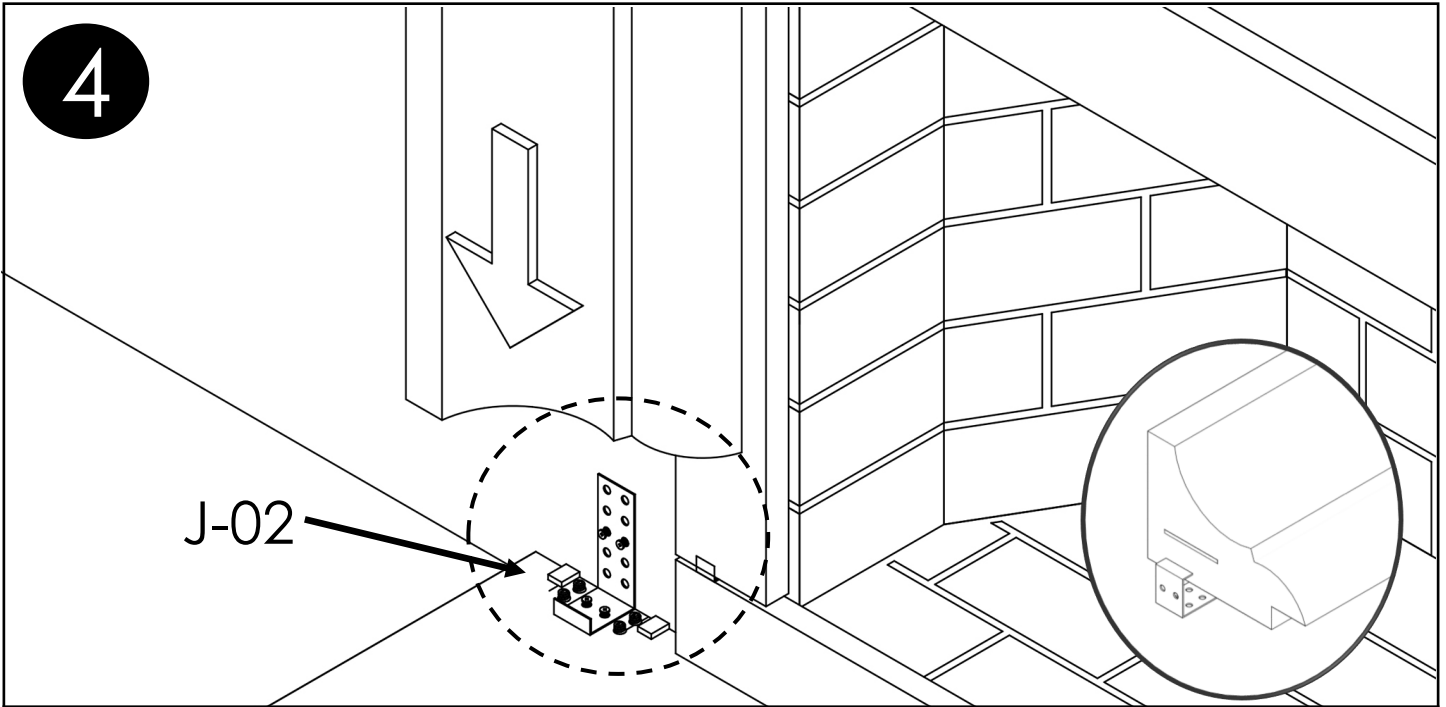
When installing a J-02 leg and mantel mounting bracket, two Tapcons must be drilled and secured through the horizontal surface into the floor or hearth and at least two Tapcons or screws into the wall at stud locations.



Drill one J-02 bracket into a stud or with a toggle lock heavy duty drywall anchor. After clip is secured, place $\frac{1}{4}$ " spacers and a few dollops of adhesive to both sides of the clip.

MANTEL LEGS INSTALLATION

(continued)

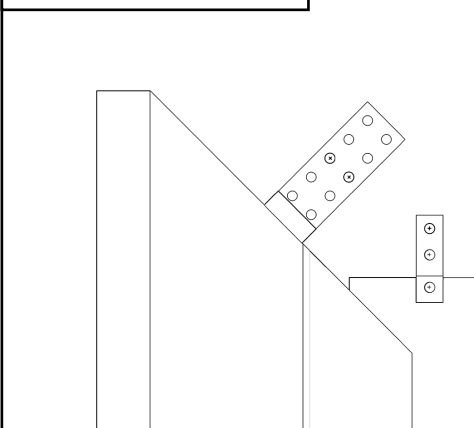


Carefully lift left leg into place so that its bottom slot fits over the toe end of the J-02 bracket installed in step 4. Be sure to align the inside edge of the leg with the mark made in step 6. Press the leg against the wall.

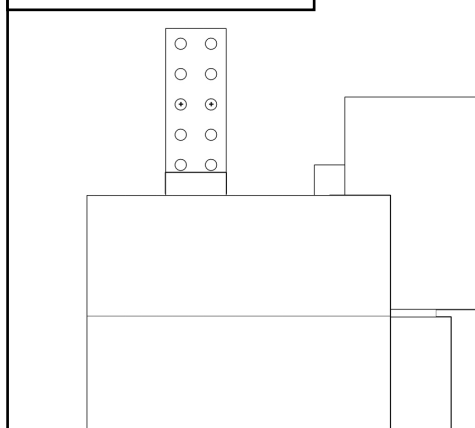
5

Refer to setting drawings for header notch dimensions for your mantel. Mark location & length on tops of legs. Secure top of leg to wall using J-02 clip placed within notch space. Refer to images below for your leg shape.

A. Mitered leg



A. Flat leg



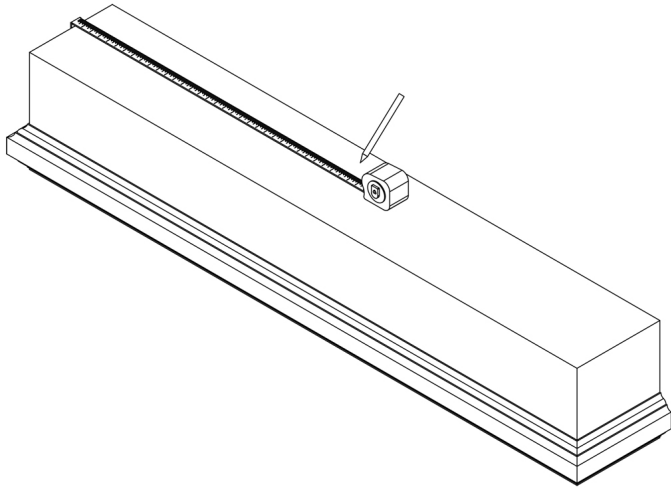
**REPEAT
STEPS 3, 4 &
5 TO INSTALL
OTHER
MANTEL LEG**

6

Check both legs for level and plumb across their tops and their faces. Reference your setting drawings and confirm that the outside "leg to leg" dimension matches your install.

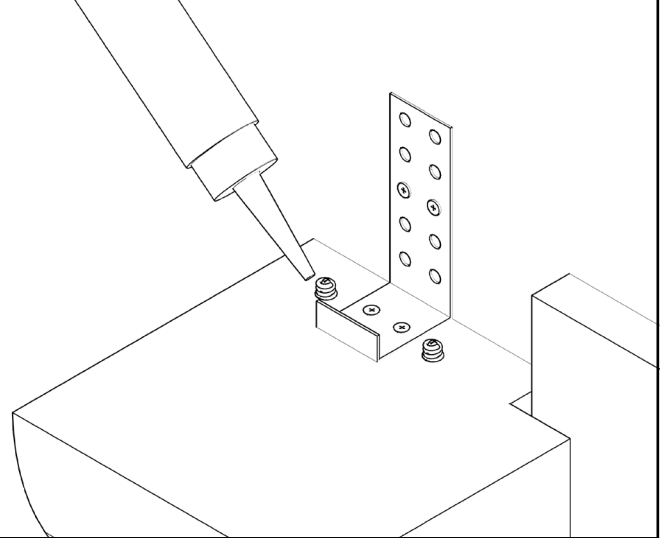
PHASE 4: MANTEL HEADER INSTALLATION

1



Measure and lightly mark the center of the header on the top, back edge of the header.

2

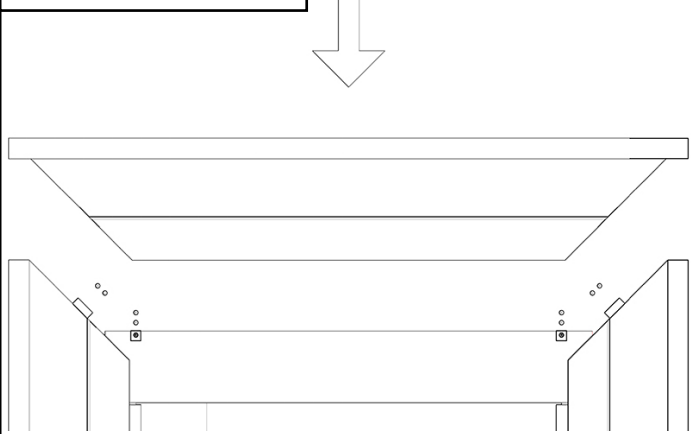


Place a small amount of mastic and 1/4" spacers on top of the legs.

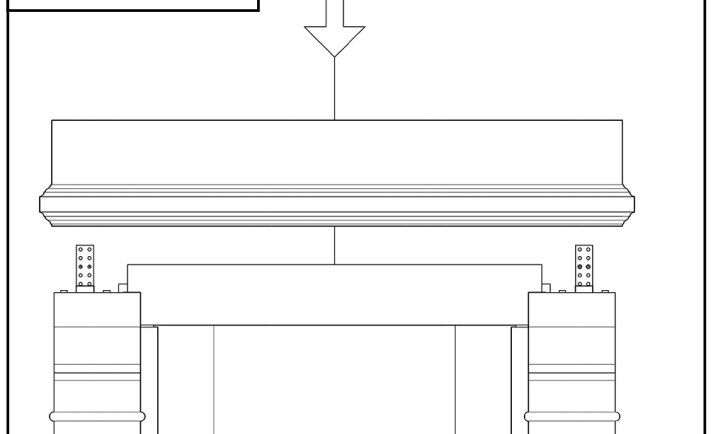
3

Carefully lift the mantel header in place so that it is aligned with the centerline on the wall and its bottom slots fit over the toe ends of the J-02 brackets placed previously. See Figures below.

A. Mitered header



B. Flat header



4

Check that the mantel header is level front to back and left to right. If it is, move to grouting phase.

If your mantel includes a 3-piece shelf, see supplemental "Shelf Install Guide".

GROUTING PROCEDURES

THE MOST IMPORTANT STEP DURING INSTALLATION IS GROUTING. RUSHING THROUGH THE GROUTING PROCESS CAN RUIN THE ENTIRE INSTALLATION, SO WE HAVE CREATED THOROUGH INSTRUCTIONS TO ENSURE PERFECTION. BE SURE TO FOLLOW THE INSTRUCTIONS SLOWLY & CAREFULLY.



INSTRUCTIONS MUST BE FOLLOWED TO ENSURE CORRECT COLOR & CONSISTENCY



TAKE A MOMENT TO MAKE SURE SURROUNDING FLOOR IS THOROUGHLY COVERED. GROUT CAN STAIN FLOORS, WALLS, AND CEILINGS.

IF AT ANY TIME GROUT SPLATTERS ONTO UNTAPED PORTIONS OF MANTEL, WIPE AWAY IMMEDIATELY WITH CLEAN WATER. GROUT LEFT TO DRY CAN DISCOLOR THE FACE OF STONES.

DE
VINCI
CAST STONE

FINAL PHASE: GROUTING

1

Carefully tape both sides of stones to be grouted between. Grout will be pressed into the 1/4" joint spaces left between stones during installation.



2

Prepare polyplex / water mixture. In a clean container, prepare water and polyplex mixture. Do NOT use all the polyplex. The ratio of water to polyplex should be 8-parts water to one-part polyplex.



3

Place about half of the dry grout mix into a separate clean container. Slowly add in the water/polyplex combo, mixing it to the consistency of a thick pancake batter.



Do NOT add too much fluid when mixing. Grout that is runny will be messy & may not match the surround in color. Water can be added, but not removed.

4

After initial mixing is complete, allow grout to rest approximately 5 minutes and then re-agitate. This breaks the grout's initial bonds, making it easier to squeeze out of the grout bag.

5

Prepare grout bag by cutting the small end of it. The opening should be approximately 3/8" diameter.

Rinse the interior of the bag with water to prevent grout from sticking. Fill the grout bag half full and twist the top to seal. To expel grout, squeeze the grout bag.



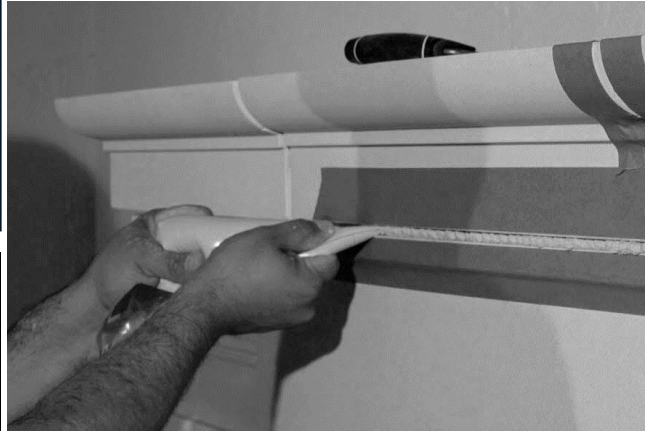
Throughout the grouting process, it is important to keep an eye out for splatters. Excess grout or splatters from it should be wiped away with a clean rag and water ASAP.

GROUTING

(continued)

6

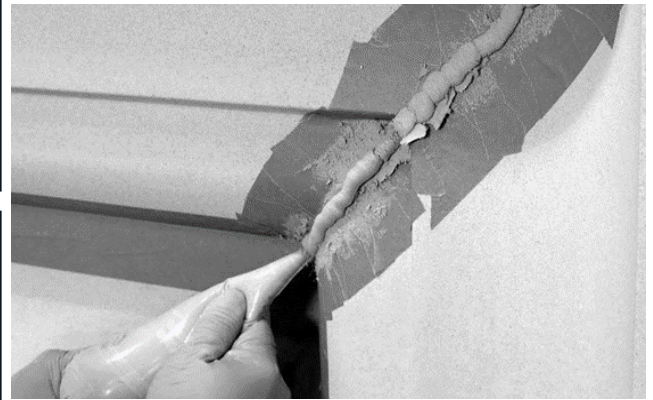
Begin grouting the mantel from the bottom, working upward. Fill grout joint liberally and work first course back into joint approximately $\frac{1}{4}$ " to $\frac{1}{2}$ " with a tuck-pointing trowel or a similar tool.



If the grout begins to stiffen, do NOT add more water. Re-agitate it with mixer first. Add water only if needed to restore consistency.

7

Apply second bead of grout, leaving it standing proud (well out from the joint). Continue the two-course grouting method throughout, filling all joints.



8

Allow grout to set up until it provides resistance to slight finger pressure and grout does not transfer to finger when touched.



Patience at this stage is crucial. Ambient temperature and humidity can affect the time needed for proper setting. This may take as long as 1 hour.

9

Using a pointing tool with medium pressure and a sliding motion, press the grout into the joint. This process will bring moisture and lime solids out to the surface again, so it is important not to go over any single area more than twice.



10

Allow the grout to set again. Grout should not transfer to finger when touched. After it is set, holding the blade of your grouting tool perpendicular to the grout lines and using short shaving motions, work grout flush with tape.

GROUTING (continued)

11

Once flush, the joints can be tooled smooth. Trowel tooled joints can cause the grout to become filmy or leave marks, so we strongly recommend using carpet or a mason's brush.

12

Remove tape, touching up as you go. Clean up any spills or blemishes on the mantel's surface and surrounding areas with a damp, clean sponge. Remember to rinse the sponge so smudge marks are not left.



CONGRATULATIONS! YOU HAVE COMPLETED THE INSTALLATION OF YOUR DEVINCI MANTEL!

Please remember to send photos of the completed mantel. We are always looking for ways to improve our processes, so feedback is highly encouraged.

Thank you for choosing DeVinci Cast Stone!

