

FIREPLACE MANTEL INSTALLATION

This is an installation guideline only. Local codes may vary and should be checked. A general knowledge of masonry skills is assumed.

THE HEARTH

The first step in mantel installation is to attach the hearth to the subfloor. The hearth sections are set by applying a layer of thinset mortar to the subfloor and to the bottom of the individual hearth pieces and then carefully positioning the pieces in the same manner that tile would be set. In some cases, a thin bed of brick mortar may be required for leveling.

If the subfloor is made of wood, OSB, or any other non-masonry material, we recommend that a layer of backerboard be placed (without mortar) on the subfloor and that the hearth be attached to the backerboard.



Backerboard with Hearth

RAISED HEARTH:

A substructure should be built from CMU, brick, or other masonry material. A wood substructure is recommended only if the subfloor is wood or OSB and weight is a consideration. Wood substructures should be covered with backer board. Next, set the hearth on the substructure as described above and clad the sides of the substructure using the same procedure.



Example of a Raised Hearth



Example of a Raised Hearth



Raised Hearth Before Grouting

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MANTEL LEGS

Place ¼” spacers on the hearth where the legs will be positioned. Apply thinset mortar to the back of the legs and then set in position. Shim the legs as necessary to insure that they are plumb and level. The top of the leg is then mechanically tied to a stud behind the wall by using a masonry tie or L-bracket.

Another method of mechanically attaching the leg is to “toe” it in by drilling at about a 45 degree angle and using long screws. Care should be taken not to drill within 2 inches of the edge of the leg.



¼” Leg Spacer Placement



Attaching the Mantel Leg with a Masonry Tie



“Toe-ing” in the Mantel Leg

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THE HEADER

Place ¼” spacers are placed on the top of the legs. Apply thinset mortar to the back of the header. Carefully lift and set the mantel header on the spacers. Due to the weight of some headers, mechanical lifting equipment may be needed. *Caution: Because the use of crowbars or similar tools to position the header may chip the stone, this procedure should be avoided.* Shim as necessary to insure that the header is plumb and level. Locate the studs behind the header and mechanically tie it to the wall.



Lifting the Mantel Header



Applying Thinset Mortar to the Mantel Header

This method can be used for one piece mantel headers and shelf. For one of these mantels, a different method is used to mechanically tie the header to the wall:

First, locate two or more studs behind the header. Drill lag screws into the studs, leaving approximately 1½” exposed. Locate the correct position on the back of the header and drill oversized holes or cut slots with a saw and masonry blade to receive the lag screws.



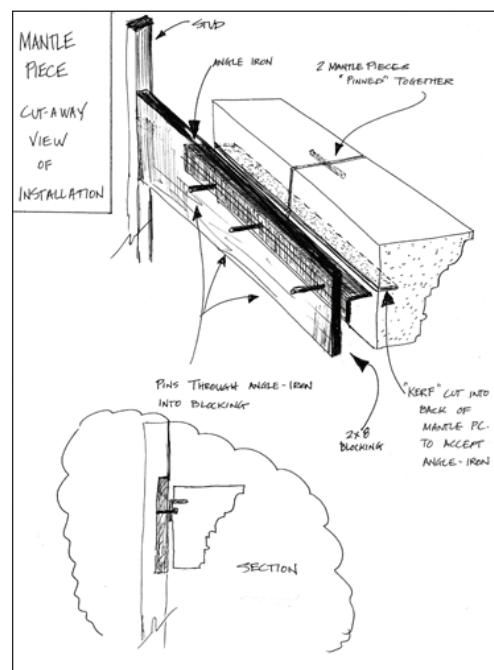
Spacers and Lag Screws

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THE HEADER (CONTINUED)

Fill the holes with thinset mortar or epoxy, apply thinset mortar to the wall and back of the header, and carefully set the header on $\frac{1}{4}$ " spacers placed on top of the legs. See cautions listed above when lifting the header.



Cutting Slots to Match the Lag Screw Locations



Setting the Mantel Header

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SHELF

Place ¼” spacers on the top of the header and use thinset mortar to attach the shelf to the top of the header and the wall. For most styles, it is not necessary to mechanically tie the shelf to the wall.

FILLER PANELS

Filler panels, if any, are generally installed using only thinset mortar. Install the side filler panels first, using ¼” spacers on all sides meeting other stone. With prefabricated fireboxes, the black flashing on all sides of the firebox opening can normally be covered with stone, but take care not to cover louvers, glass, or other access points. Temporary supports may be needed to keep the top filler panel in place while the thinset mortar cures if the style being installed does not have side filler panels.

Thinset does not hold well when applied to metal. If the filler panels are to be applied to metal only, use a construction adhesive (such as “Liquid Nails”) instead of thinset mortar.

Caution: Be careful not to attach any stone to metal which will heat up when a fire is started. Thermal expansion of the metal may break the joint and possibly the stone.

GROUTING

Tape and bag grout all the joints. (Caulk is often used in the joints between the mantel and the wall to prevent cracking caused by wall movement.) Sponge all exposed surfaces with clean water as the grouting operation proceeds to ensure that mortar does not dry on the mantel face.



Applying Grout to the Mantel Joints



Finished Mantel Installation