WOOD STONE
FOR THE HOME

Facade Tutorials

MOUNTAIN HOME

Option
6

Flat Wall with
Arched Doorway &
Service Panel Extension

Incorporating your Wood Stone Home oven into a facade.

Initial Considerations

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There are a virtually unlimited number of design possibilities available when integrating a Wood Stone Home oven into your kitchen. This booklet covers initial considerations, basic layouts and construction considerations to help you successfully incorporate your Wood Stone Home oven into a facade.

We recommend the following links for additional installation information:

- Photo Gallery
- Wood Stone Facade Extensions
- Custom Oven Finishes
- Unloading & Moving
- Installation Clearances
- Wood Stone Oven Venting
- Installation and Operation Manuals

Submit your installation and ventilation plans to your local authority having jurisdiction before proceeding.

The shape of Mountain Home ovens makes them ideal for inclusion into a wide range of structural plans, including flat and curved walls, corners, cylinders and even freeform shapes.

Alternatively, because of its rectangular shape, Bistro Home ovens are often incorporated into a kitchen design by applying facade materials, such as tile, stone or brick, directly onto the oven exterior.

To ensure a surprise-free facade installation with any model, the following considerations should be addressed early in the oven selection and design process:

1. VENTING & CLEARANCES

The oven must be connected directly to a grease-rated duct. Use either a manufactured grease duct listed to UL 1978, or a field built grease duct constructed in accordance with NFPA96 and other applicable codes. Grease duct is specifically designed to safely vent flammable grease-laden vapors from cooking equipment. B-vent or other common residential duct material should not be used. The facade design must allow for proper airflow and adequate clearances. See the Installation and Operation Manual on the Wood Stone Home website for details.

2. THE FACADE SURROUND

Do you want to install a finish wall across the face of the oven or install the oven within an enclosure? Will you fabricate the connection between the oven and facade or, in the case of Mountain Home ovens, use optional Wood Stone facade extensions? An extensive assortment of facade extensions has been designed to substantially reduce on-site fabrication and installation time, taking the guesswork out of the construction process and helping to ensure a durable, safe installation. A wide array of doorway, storage box and service panel facade extensions can be seen on the Facade Extensions section on the Wood Stone Home website.

3. FACADE MATERIAL UNDERLAYMENT

If installing finish materials directly onto the oven, will underlayment be installed on-site, or will the oven be ordered facade-ready? Facade-ready ovens come with the non-combustible cement board underlayment pre-installed and ready for immediate application of the facade materials. Proper allowances are made for combustion air openings, and relevant components are extended to accommodate the depth of applied materials to create a clean finished look. All finish material must be non-combustible.

4. STUCCO-READY OVENS

For a traditional look, Mountain Home and Bistro Home ovens are available stucco-ready. The sheet metal oven body exterior is omitted, and instead the fully-insulated oven body is covered with steel mesh, ready for field application of non-combustible stucco (by others). Stucco-ready ovens are connected directly to a grease-rated duct.
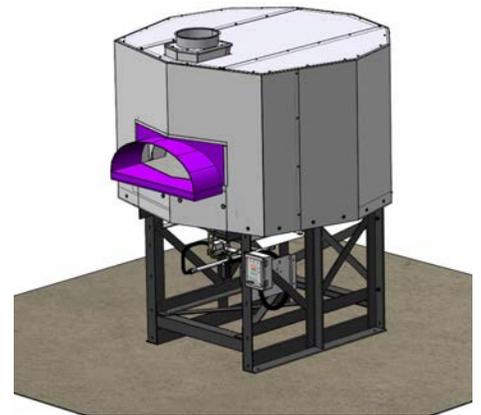
mountain home

This tutorial covers flat wall facade installations utilizing the optional Wood Stone Doorway Facade Extension Arched. The oven is vented via the direct connect venting method.

Illustrations in this tutorial are representative of all MH models. However, there are some differences between models. Notable specific model differences include the absence of a Flame Height Control Knob on ovens without a radiant flame (WS-MH-W and WS-MH-W-IR models). The WS-MH-4 model has a flat face above the doorway and, if equipped with an IR burner, does not support Storage Box Extensions due to space limitations. The specific configuration will also influence which Controller or Temperature Readout is installed.

THE BASE OVEN

The graphic to the right shows the WS-MH-5-RFG-IR oven as it would arrive—with an optional Doorway Facade Extension Arched welded into place.

Specification Sheets and CAD (KCL) symbols (*dwg) for Mountain Home ovens can be found under the Specs & DWGs tab of the model's product page on the Wood Stone Home website.

Step 1. INSTALL SUPPLIED OVEN COMPONENTS

Mount the Service Panel Extension, which is shipped uninstalled, per the instructions in the Installation and Operation Manual.

The Service Panel Extension will have been pre-aligned with the Doorway Extension at the factory and then removed prior to shipping.
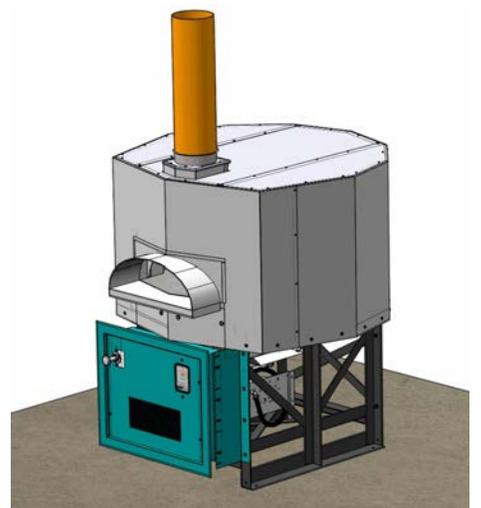
Note: Upper and lower extensions should be ordered with the oven so they can be pre-aligned at the factory.

Note the perforated section in the lower section of the inner panel. This area allows airflow to the burners under the oven. It is mandatory that airflow not be blocked. Inadequate combustion air will impact the performance of the oven. See Airflow Detail on next page.

To avoid common installation mistakes that affect airflow, see the Oven Venting section of the Wood Stone Home website.

Connect the flue to the oven's flue collar. This flue must be a grease-rated duct. Use either a manufactured grease duct listed to UL 1978, or a field built grease duct constructed in accordance with NFPA96 and other applicable codes. Grease duct is specifically designed to safely vent flammable grease-laden vapors from cooking equipment. B-vent or other common residential duct material should not be used.

If the oven is being completely enclosed, make certain the duct system has been approved by the authority having jurisdiction before covering. See the Oven Venting section on the Wood Stone Home website for more details.

Step 2. BUILD STUD WALL

The stud wall is shown in green. Metal studs are recommended. Around the doorway area metal studs are required. Maintain a 1-inch clearance from the oven to combustible materials. Do not pack this airspace with insulation or any other material. A zero-inch clearance from the oven to non-combustible materials is allowed. However, the respective clearances to combustibles are transferred to those non-combustibles.

Building materials 6 inches to either side and above the doorway must be non-combustible. See Clearances Detail below.

The Service Panel must be left accessible, unobstructed and removable after installation for air intake and routine service of the oven burner. See Airflow Detail below.

The oven controller is mounted in the Service Panel. The controller can optionally be mounted in a different position, i.e. in the wall next to the oven. When specified at the time of order, the controller is shipped with a longer wire harness to allow for custom placement, and the Service Panel doesn't have the knockout for the controller. When mounting in the wall, make sure the front face of the controller protrudes approximately 3/4 inches beyond the finished wall surface to allow the box to be opened for service if necessary. See Service Panel Extension Detail on next page.
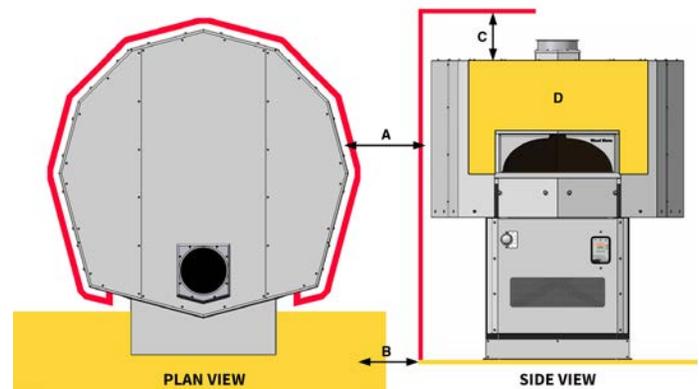
DETAIL > CLEARANCES

A major cause of oven-related fires is a failure to maintain required clearances to combustible material. Required clearances for Mountain Home ovens are defined as follows:

A. Provide 1-inch side clearance to combustible building materials. Do not pack this airspace with insulation or any other material.

B. Provide a non-combustible floor surface AND for ovens utilizing solid fuel, a non-combustible floor surface covering at least 30" to each side, and 36" in front of the door opening.

C. Provide 14" top clearance to combustible building materials.

D. Any facade materials 6 inches to either side of the doorway and above must be of non-combustible construction with no exceptions.

Note: A zero-inch clearance to non-combustible construction is allowed. However, the respective clearances to combustibles are transferred to these non-combustibles.

PLAN VIEW SIDE VIEW

DETAIL > AIRFLOW

Air flows through the space under the oven through the perforated air intake on the front of the Service Panel.
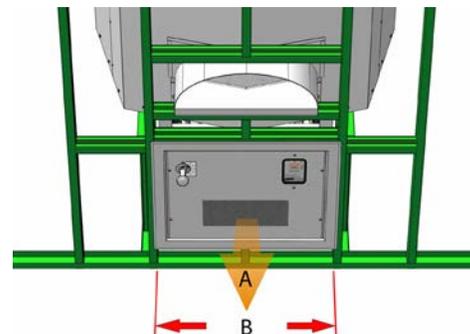
This area must be free of obstructions to allow proper airflow. The burners in the gas oven will not operate without sufficient combustion air. To avoid common installation mistakes that affect airflow, see the Oven Venting section on the Wood Stone Home website.

Flat Wall, Arched Doorway
& Service Panel Extension

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DETAIL > SERVICE PANEL EXTENSION

When the facade is complete, the Service Panel must remain removable. "A" represents the unobstructed path of the panel for removal. "B" represents the width necessary to keep that path clear after the installation of all building and facade materials.

Any facade or enclosure below the mantle of gas-fired or combination ovens must allow for (1) unobstructed access for removal of service/intake panel or storage box, (2) easy access to all controls and (3) sufficient combustion air for gas burners.

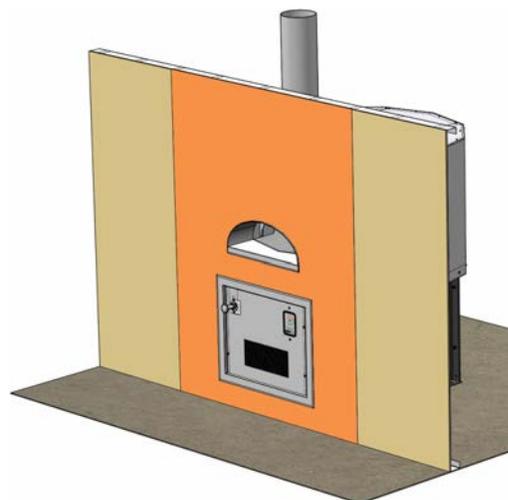## Step 3. INSTALL NON-COMBUSTIBLE UNDERLAYMENT

The material (shown in orange) is non-combustible cement board. Non-combustible material is required 6 inches to either side and above the oven doorway.

Non-combustible material is required anywhere the facade touches the doorway or mantle. Generally, non-combustible cement board is used as the underlayment material to surround the Service Panel and doorway. Drywall and Sheetrock are considered a combustible and must not be used.

Step 4. INSTALL ADDITIONAL UNDERLAYMENT

Drywall (shown in yellow) is installed on the stud wall. While building materials more than 1 inch away from the oven do not need to be non-combustible, many installers choose to make the entire wall out of the non-combustible cement board to simplify construction and create a consistent facade underlayment.
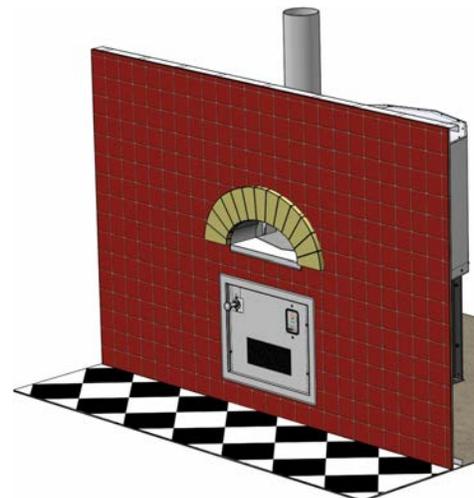
Step 5. ADD FACADE MATERIAL

The facade wall can be finished with any non-combustible decorative material that can be easily affixed to the wall surface such as tile, stone or brick. It is always advisable to consult with the appropriate authority having jurisdiction before proceeding as there may be regulations regarding the suitability of various materials. Temperatures above the oven doorway can reach over 200 °F—select materials and adhesives suitable for this temperature.

It is necessary for the proper operation of our ovens that the Flame Height Control Knob be fully accessible after all finishing is completed. This knob controls temperature in our gas ovens. See Flame Height Control Knob Detail below.

An optional Flame Height Control Knob Extension Kit is available to extend the length of the shaft in order to accommodate any facade depth, although this is not necessary when using Facade Extensions available from Wood Stone.

DETAIL > FLAME HEIGHT CONTROL KNOB

The Flame Height Control Knob adjusts the height of the radiant flame inside the oven. It is required to operate the oven and must be fully accessible after all finishing is completed.

An optional Flame Height Control Knob Extension Kit is available to extend the length of the shaft in order to accommodate any facade depth, although this is not necessary when using Facade Extensions available from Wood Stone.

MORE INFORMATION

To see innovative design solutions created by other Wood Stone customers, visit the Photo Gallery on the Wood Stone Home website.

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