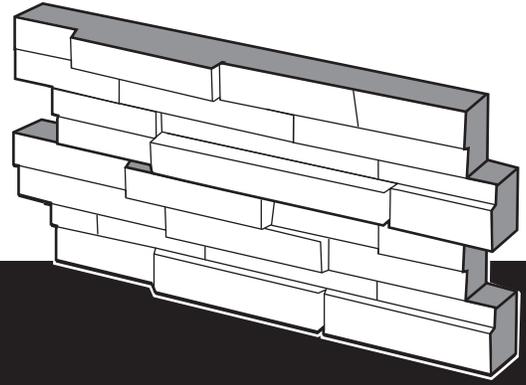


QUICK REFERENCE INSTALLATION GUIDE



STONE VENEER PANELS

1. SURFACE PREPARATION

Illustration

Rigid backwall surfaces:

- Plywood
- Wallboard
- OSB
- Concrete Board
- Panel Board
- Concrete
- Masonry
- Stucco

Prepare the rigid back wall by reinforcing the wall structure for strong structural support and additional stone load. Adding a substrate barrier is required for all interior and exterior wall applications using mortar. This barrier will prevent moisture, corrosion and weather elements from penetrating beyond the veneer layer.

For interior/exterior walls: Nail or staple weatherproof roofing felt over the entire back wall and corners where veneer is planned. Then cover with expanded metal lath. Minimum 18-gauge galvanized expanded diamond mesh or woven wire mesh. Fasten lath with corrosion-resistant nails, staples, or concrete nails.

Waterproof substrate Materials:

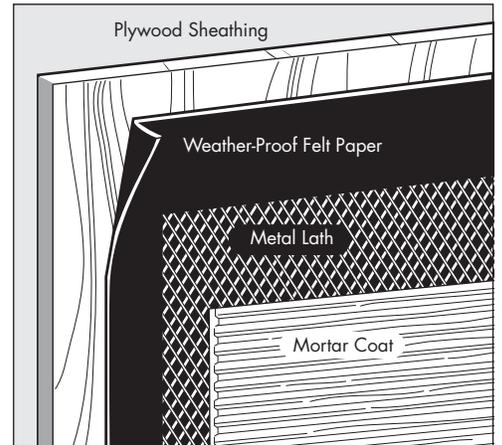
- 15 lb. Roofing Felt
- Waterproof building paper or asphalt saturated rag felt

If you are working from an existing wall, be sure to clean off surface of loose debris. Fix any questionable areas of the wall to be structurally sound. For exterior walls, pressure-wash or sandblast or scrape off surface so it is free of oil, grease or old paint. Securely attach expanded metal lath over cleaned area.

Reinforced Metal Lath :

- Galvanized expanded metal lath

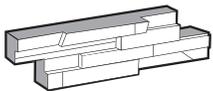
For clean, untreated, unpainted concrete, masonry or stucco walls: Clean surface free of oil and debris. No further preparation is necessary.



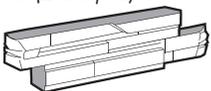
To prevent damage from weather elements, weatherproof construction felt paper is installed over the back wall surface. A metal lath layer is added to increase the integrity of the mortared wall from movement and cracking.

2. DESIGN AND LAYOUT

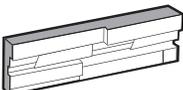
Examples of modular panels and components:



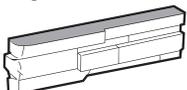
Offset (Z-Shaped)



Offset Corner



Rectangular



Rectangular Corner



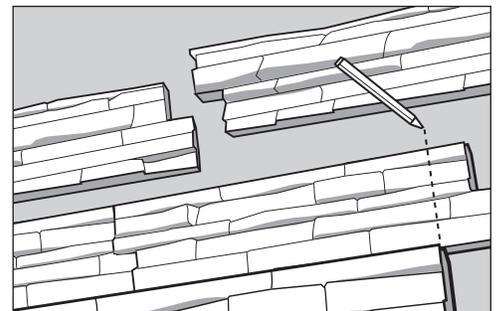
Capstones/Wall Caps/Trims

Great looking design takes planning. Although stone veneer products have simplified much of the process from traditional stone installations, it is still important to pay attention to the way the stones are arranged in order to achieve a visually pleasing design.

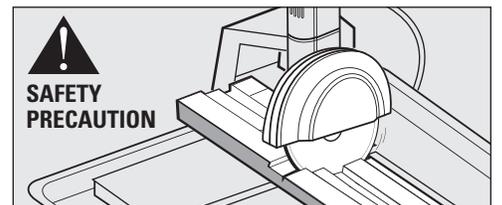
For the best possible results, begin your design by spreading out as many veneer pieces on the ground so that you have a good variety of shapes and colors to choose from. Assemble them as you would on the wall. Rearrange pieces if necessary to distribute an even amount of color and texture in the overall design.

Precut and pre-fit the veneer panels to fit exact dimensions of your wall to ensure good fitment of all pieces. Trimming can be made using a wet-saw equipped with a diamond tip blade. Cutting should always be done outdoors in a designated safe area. All edges, corners and seams should be "tight" fit. There should not be a visible grout line or mortar line between each modular panel. Try not to repeat the same modular placement row to row, try to overlap and conceal the seams by offsetting each module. This technique will ensure a virtually undetectable and seamless look.

Although this entire session may seem like a timely and unproductive process, it will actually save lots of time later when you are ready to do a final paste onto the wall.



Pre-fit and precut all the pieces by arranging a dry layout. Test fitting will ensure good fitment of all pieces during final installation.



SAFETY PRECAUTION
Always wear protective eyewear and proper working gear when operating machinery and cutting tools.

continue reverse side

3. APPLYING MORTAR

Types of Thin-set Mortar:

- **Water-Mixed Mortar:** Blend of Portland cement, sand, additives and water.
- **Latex or Acrylic Modified Thin-set Mortar:** Similar to Water-Mixed but includes additives to improve adhesion and reduce water absorption.
- Also consider using a variety of thin-set additives to increase bonding strength to best suit your need.

There are many choices when selecting adhesives. The first step in choosing an adhesive is to determine what type of installation you are doing. Indoor or Outdoor? Wall or Floor? And what material is the stone being applied on? Will the installation be exposed to heat or moisture? Knowing some these differences will help narrow your selection when choosing the right adhesive for your job.

The type of adhesive recommended for most tiling and stonework is thin-set mortar. Thin-set is available in pre-mixed containers or dry compounds. Premixed thin-set are popular because they are easy to use and require no additional mixing and clean up. Mixing your own thin-set requires more work, but offers stronger bonding strength and flexibility.

Begin your stonework by applying mortar on the bottom and starting at corner points. Apply 1/2" up to 3/4" of mortar onto the prepared surface area using a trowel. Work in small areas at a time, (5-10 sq ft) so that the mortar does not begin to set or dry out. Hold the trowel at 30o angle and use sweeping strokes to spread mortar to a consistent depth. Remember to refer to your dry layout and visualize where the next piece will go. Install the veneer panels once mortar has been applied.



Mix enough mortar to the amount you think you can use up in 30 minutes. Excess mortar will dry up and become unsuitable for adhesion. Maintain proper consistency by stirring the mortar regularly.

4. INSTALLING STONE VENEER PANELS

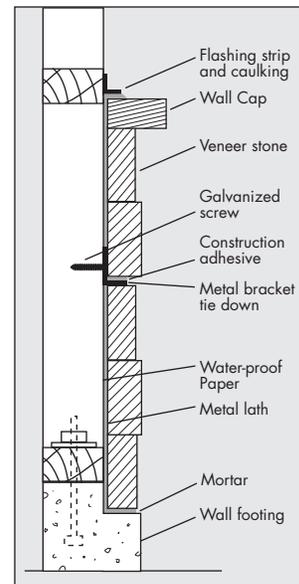
Recommended Tools and Supplies:

- Diamond Blade Wet-saw
- Power drill with mortar mixer attachment
- Mixing bucket
- Plaster's trowel
- Margin's trowel
- Mason's trowel
- Caulking gun
- Contractor's Level
- 25' Tape measure
- Hammer
- Rubber mallet
- Chalk line
- Putty knife
- Sponge
- Clean-up cloth
- Old tooth brush

It is generally better to start installation at the bottom first and at corners or intersections. Start the installation of the stone veneer by applying a thin amount of mortar to the back of the veneer panel. Paste the veneer panel onto the marked area of the wall, and onto the applied mortar layer. Press the panel firmly into the mortar to form a thorough bond into the veneer. Apply enough pressure so that slight amount of mortar squeezes out from the back gap. Tap lightly with a rubber mallet if needed.

To ensure good adhesion, test for mortar coverage on a veneer piece just installed. Pry it out and look at the bottom. About 75% of the veneer should be covered with mortar. If less half appears to be stuck on either surface, the mortar may be too dry, or not enough is applied.

After placing the corners and bottom row of stones, check to see if the entire row is level and straight. Fine tune your layout if necessary by using spacers to correct unevenness in the wall. Continue installing onto the next row, keeping all the joint spaces tight and with minimum gap. For tall structures consider using bracing or metal anchor ties to hold down the veneer in place and prevent any movement. Allow up to 48 hours for the mortar to cure, and at least 5-7 days for the entire wall to set-in.



veneer wall cross section

Adhere metal flashing strip and caulking to seal exposed areas such as edges and ends where water damage may occur.

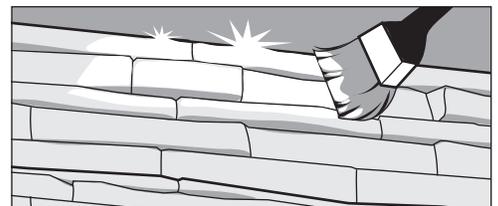
4. CLEANING UP AND TOP COAT SEALERS

DO NOT use to clean veneers:

- Acidic chemicals or cleaning agents
- Water hosing
- Power-washing
- Sandblasting
- Wire brush
- Sandpaper
- Chisel or scuffing tool

Clean up spills and droplets of mortar as soon as possible to prevent the mortar from staining the surface of the veneer. Use a wet sponge to dilute the mortar spill or lightly brush off hard to reach areas. To remove stubborn stains use a mild soap solution and wipe clean. Do not use harsh chemicals, as it may create an undesirable effect. For regular care simply sweeping away dust and debris with a broom.

A topcoat sealer can be applied to enhance a stone's finish and add extra protection from corrosion. Test the sealer on a small space before applying on a large area. Sealers can be re-applied once every 2-5 years for further protection.



Clear sealers can beautify and add further protection against water damage, chemical corrosion and stains.

Disclaimer: Slate is a product found in nature. The natural characteristics of this product will produce variations in texture, color, and pattern. Therefore, no two pieces will be exactly alike and each installation will be different. The diagrams and instructions found on this guide are simplified installation procedures that are intended to assist you in getting started on this project and help to familiarize with our product line. Requirements to thoroughly complete each task may not be specified here due to space limitations. This guide is not a replacement for complete installation procedures that may be different for your project or application. Follow safety precautions. Check with city officials for compliance to the building code requirements in your area. To ensure the best possible results, always consult a licensed contractor or professional before starting any remodeling project. Copyright © 2007 MG HOME USA.

