

M-ROCK Stone

INSTALLATION OF TRADITIONAL STONE

(REQUIRES MORTAR)

READ

- Read the instructions and become familiar with the stone.
- Adhere to your local building codes.
- Ensure that you have all the tools and supplies you will need.
- **We are here to help, just call customer service 866-896-7625.**

PREPPING THE SURFACE

Most M-Rock Stone products are typically installed by a qualified mason, however, even someone with basic masonry skills can install manufactured rock.



The following is a sampling of procedures for the installation of M-ROCK'S Traditional stone products. It is recommended to check building codes for requirements and/or restrictions. **Verify structural and surface integrity of existing wall prior to installation.**

SUPPLIES YOU WILL/MAY NEED:

Along with your Traditional Flats/Corner Stones

- S-Type Mortar and sand
- Wheelbarrow and hoe
- Hammer / staple gun
- Mason's, Hock and Margin trowels
- Level
- Masonry, circular or table saw or grinder with carborundum or diamond blade
- Safety glasses and dust mask
- Grout bag
- Wide-mouth nippers or hatchet to trim stone
- Whisk broom for cleaning finished stone areas
- Weather-resistant barrier (code approved building paper)
- Code-approved galvanized metal lath
- Galvanized nails, staples and concrete nails
- Masonry sealer (only if required)
- Large sponge

RIGID BACKWALL	EXISTING MASONRY SURFACES	OPEN STUDS
<p>Including walboard, plywood, paneling, wall sheathing, concrete board, polystyrene insulation board.</p> <ul style="list-style-type: none"> • Cover sheathing with 2 layers of 30# felt or weather-resistant barrier, lapping joints 4" shingle fashion. • In accordance with local building codes, lap and install lath or galvanized mesh using galvanized nails or staples vertically 6" on center, penetrating studs and a minimum of 1". • Continue to wrap weather resistant barrier and lath a minimum of 16" around all outside and inside corners. 	<p>Surface must be evaluated for mortar and face integrity and must be free of dirt, waterproofing, paint, or any other substance that could inhibit the mortar bond. Most masonry and stucco wall surfaces do not require preparation.</p> <p>Surfaces may be cleaned by pressure washing, acid washing, sand/ bead blasting, or a combination of these methods to achieve a bondable surface. If the surface cannot be cleaned, attach lath before applying the mortar scratch coat.</p>	<p>Open studs, non-rigid sheathing and metal siding must be prepared with 30# paper backed lath with a minimum 1/2 inch thick scratch coat and allowed to cure for a minimum of 48 hours prior to installation</p> <div data-bbox="1055 1354 1518 1606" style="background-color: #c00000; color: white; padding: 5px;"> <p>Five Common Mistakes To Avoid:</p> <ul style="list-style-type: none"> • Not wrapping your corners with lath • Mud and dirt stains from splashing • Hazing of the stone • Leaving voids behind the stones • Extreme conditions (too hot or cold) </div>

ESTIMATING YOUR PRODUCT TO SURFACE COVERAGE NEEDS

M-Rock Stone is available in flat stones to be applied to the wall surface and corner stones to fit around 90 degree outside corners.

FLAT STONES:

- Calculate the total area for each wall by multiplying the width by the height.
- Subtract the area for windows, doors and/or other openings from each wall's area.

CORNER STONES:

- Measure the height of each outside corner to get your total linear feet.
- Inside corners do not require corner stones, as flat stones meet to create a natural corner.

ADJUST NUMBERS

- Multiply the corner stone linear feet (height) by 50% Coverage will vary by texture.
- Subtract this amount from the total flat stone area.

ESTIMATE FRONT OF HOUSE

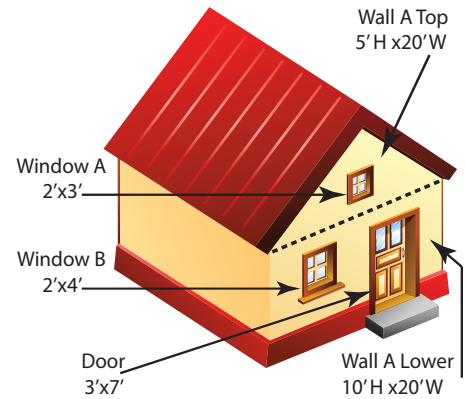
Wall A Lower: Width = 20', Height = 10'
Area: $20 \times 10 = 200$ sq. ft.

Wall A Top: Width = 20', Height = 5'
Area: $20 \times 5 = 50$ sq. ft.

Window A: Width = 4', Height = 2'
Area: $2 \times 4 = 8$ sq. ft.

Window B: Width = 3', Height = 2'
Area: $2 \times 3 = 6$ sq. ft.

Door: Width = 3', Height = 7'
Area: $3 \times 7 = 21$ sq. ft.



Wall A Flat Stone Coverage:

Wall A Lower = 200 sq. ft.

+ Wall A Top = 50 sq. ft.

- Windows and Doors = 35 sq. ft.

Total Stone Needed = 215 sq. ft.

MORTAR MIX:

- 1 part S-Type Masonry Cement
- 2.25 parts Sand
- Potable water

INSTALLATION OF M-ROCK'S TRADITIONAL STONE VENEER

STEP 1: STARTING OFF RIGHT

Prepare your mortar. Mix premixed Type S mortar to a firm, moist consistency. Mortar that is too dry and crumbly will not provide proper bond. Mortar that is too wet will be weak and messy. Spread mortar 1/2" to 3/4" thick onto a workable area of prepared surface using a masonry or plasterer's trowel. The mortar should be applied with sufficient pressure and thickness to fully embed the lath in mortar. Once the mortar is thumbprint hard, scratch the surface horizontally to create the scratch coat. Do not spread more than a workable area (5 to 10 sq. ft.) so that mortar will not "set up" before stone is applied.

STEP 2: LAYING OUT YOUR STONE

Opening several boxes and lay out approximately 25 sq. ft. of stone a varying the sizes, shapes, and colors, allowing for variety and contrast in the design to achieve the desirable finished project. This is recommended to help you avoid patterns and voids. Break up long horizontal and vertical lines with stones of varying height and length.

STEP 3: CORNERS FIRST

Apply corner pieces first if corners are required. Alternate long and short legs in opposite directions. Once the corner pieces are in place, apply flat pieces, working toward wall center.

TIP: Working from the top down may help avoid splashing previously applied stone with dripping mortar. Ledge stone and drystack types should be installed from the bottom up.



STEP 4: APPLYING THE MORTAR AND STONE

The back of each stone should be entirely buttered with mortar to a thickness of 1/2". The stone should be firmly worked onto the scratch coat and slid slightly back and forth or with a slight rotating motion to set the stone. Achieve mortar squeeze out in a volume which results in a full setting bed which covers the scratch coat completely. With the proper mortar mix, moisture content, and scratch coat preparation, the installer will feel the mortar start to grab within a few seconds. At this point, no further movement of the stone should be made as bonding will be broken.

TIP: Care must be taken to avoid smearing mortar on surface of stone. Accidental smears or mortar droppings should be removed using a whisk broom only after mortar has become crumbly.

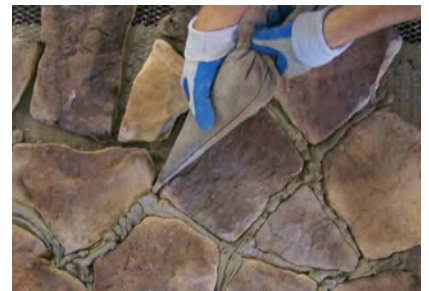
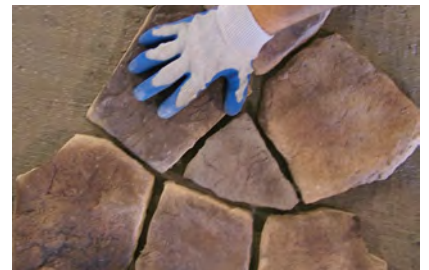
DRY STACK/LEDGE STONE: NO GROUT LINES

If using tight fit/drystack method, it is important to make sure scratch coat/backing has been covered completely by the setting bed of mortar. This will conceal the scratch coat/backing and prevent pockets from forming behind stones that could trap water. When installing, the backs of all these components must be noticeably damp, but free from surface water. Install all these products with tight-fitted joints. Generally, components should be placed butting each other and aligned for level and plumb. Mortar must be tinted to match the color of the stone you are installing to help conceal the joint lines. Using a trowel, strike off the excess mortar around the edges of the component prior to placing the next component. This will allow the next adjacent component to fit tightly. Check for level and plumb.

GROUTED STONE: FIELDSTONE AND RIVERSTONE

Place the individual stones close together, creating uniform joints between them. Stones can be cut and shaped with nipper or hatchet to create a natural appearance. Cut and trim as required to achieve consistent width in the mortar joints. Then trim and fit small pieces into any remaining voids. For best appearance, coat cut or broken edges with mortar. Position cut edges away from eye level. Always use safety glasses when cutting and trimming.

Grouting the joints should be completed only after there is sufficient cure time of the installed stone; when mild contact will not break the bonding. Grouting may be done with a grout bag, filling joints to the desired depth, ensuring that mortar is forced into all voids. Grout should be "thumbprint hard" before raking the joints. This curing time before the grout is ready will vary significantly with temperature and humidity. Use a wooden raking stick or pointed tool to rake the joints to the desired depth. Extra precaution should be taken while raking so the surface of the stone is not damaged. Clean off remaining grout debris on the stone surface with a dry, soft-bristled brush.



STEP 5: FINISHING IT OFF

Remove any unwanted mortar from stones only after mortar has become crumbly. Use a whisk broom or dry bristle brushy to remove. **Never use water, a wet brush or wire brush as staining or damage may occur.**