

A SIMPLE STEP-BY-STEP INSTALLATION GUIDE.



Installing Preferred Handcraft Stone® really is simple. It involves 9 easy steps:

1. Estimating The Amount Of Stone
2. Preparing The Surface
3. Scratch Coat Over Metal Lath
4. Marking The Wall (not required for Split Face or River Rock)
5. Organizing Your Stones, Cutting and Trimming
6. Preparing The Mortar and Grout
7. Laying The Stone
8. Cleaning Up
9. Sealing

You'll need some basic tools:

- Safety glasses and other personal protective equipment (gloves, dust mask)
- Roofing Nails
- Hammer and/or staple gun
- Grout bag
- Whisk broom/soft wire brush
- A trowel
- A level or plumb line
- Metal jointing stick/wood stick
- A circular saw or hand held grinder with a diamond or carbide blade/wide mouth nippers
- Wheelbarrow or large metal pan for your mortar and grout/hoe for mixing

STEP 1

ESTIMATING THE AMOUNT OF STONE

Before you start installing your stone, you'll need to figure out how much stone to purchase. This will include flat stones and corners.

a) Measuring The Amount of Flat Stones.

To calculate how much stone you'll need, simply measure the area being covered in square feet. Square footage is easy to calculate by measuring the height and width of each flat surface, then multiplying these dimensions to get the square footage.

IMPORTANT: If the surface has a door or window, remember to subtract the square footage of the area not covered by the stone.

For more complicated projects with several curved or flat surfaces, first measure the square footage for each area separately as explained above. Next, add the square footage together to get your total square footage.

This total square footage represents the amount of flat stone you'll need to purchase. Be sure to add 5% for waste.

b) Measuring The Amount of Corner Stones.

Since corners are sold by the lineal foot, Simply measure the length of any corner, then add these together for your total corner length.

* 1 linear foot of corner = approx. 1/2 square foot.

STEP 2

PREPARING THE SURFACE

Preferred Handcraft Stone® is designed for installation over almost any surface. This includes wallboard, plywood, drywall, wall sheathing, concrete board, insulation board and rigid back wall.

Just make sure the surface is a solid permanent structure that is dry and can be cleaned and prepped.

Preparing bare wood, wall sheathing and drywall:

To install onto bare wood, first attach a vapor barrier to protect the wood. We recommend using a two-ply Grade E 30-60 minute tar paper that's made in Canada that complies with building code specifications. To attach the paper, simply start attaching from the bottom, making sure to overlap the paper by 24 inches at the edges, using a small hand stapler to affix the paper. Stone application must be protected from water penetration by proper flashing or caulking to prevent water from getting behind the stones.

Next, attach the galvanized metal lath (diamond meshing) into the studs every 6" vertically and 16" horizontally with galvanized roofing nails with a 1" penetration. Overlap the lath by 4" at every seam and wrap the lath 16" around every outside corner. Attach the lath with the small diamonds pointing upwards and make sure to keep the lath flat and tight as possible, use extra nails if needed.

Next, apply a scratch coat 1/2" thick and cure for 24 hours. During hot weather mist scratch coat 3 to 4 times while drying.

Preparing Clean, Untreated Concrete, Masonry or Stucco:

If the concrete, masonry, brick or stucco is already clean, make sure the surface has no oils or other agents. If there is a release agent, remove as recommended by release agent manufacturer and return concrete/masonry to original finish, no scratch coat is needed.

Then, install the stones directly to the surface (since no steel lath or meshing is required).

Preparing dirty, painted or sealed concrete, masonry or stucco:

First, clean and scour the surface as thoroughly as possible using a water blaster, chisel score and/or wire brush to return the surface to a clean finish smooth finish. We also recommend that you sand and wash the surface to remove surface dust.

If the surface is impossible to properly clean, attach a galvanized metal lath (diamond mesh) to the surface using concrete nails for added strength. Now you can apply your scratch coat.

Preparing metal buildings:

Surface preparation is same as bare wood (see above), except the galvanized metal lath should be attached with self-tapping screws. Then apply 1/2" scratch coat.

STEP 3

SCRATCH COAT OVER METAL LATH:

For mortar preparation (see step 6). Apply a 1/2" thick scratch coat, consisting of sand and cement. Using a mason's trowel, apply the mortar to the lath making sure the lath is completely covered and the surface is flat. While the surface is still wet, rake the scratch coat to allow a good adhesion between the stone and the wall. Let cure 24 hours. In hot weather, before spraying stone, mist the scratch coat to prevent moisture loss from the mortar.

STEP 4

MARKING THE WALL: (NOT REQUIRED FOR SPLIT FACE OR RIVER ROCK)

When installing, the stone chalk lines should be snapped every 4" to 8" across the wall to make sure the stones are straight and level. A level can be used on individual stones for added alignment.

STEP 5

ORGANIZING YOUR STONES, CUTTING AND TRIMMING

To get the best final result, we encourage you to lay out the stones on the ground or a table to experiment with the final look without worrying about drying mortar. This includes the cornerstones which should also be laid out. We suggest if you are doing a bigger job to intermix the stones from all the boxes so you will get a more even distribution of colors throughout your entire surface.

The stones that need to be cut or trimmed should now be done. Stones can be cut or shaped using a circular saw or a hand held grinder with a diamond or carbide saw blade and/or wide mouth nippers. Broken stones can be used to fill in gaps between larger stones. The cut or broken edges should be covered with mortar for a nice appearance.

STEP 6

PREPARING THE MORTAR & GROUT

Now that you've prepped your work surface and decided how you want to lay out your stones, it's time to mix your mortar.

This step requires a Type S mortar available at most home improvement centers.

Simply pour the mortar and fine sand into a large metal pan (for smaller jobs) or a wheelbarrow (for larger jobs), then add water until you get a heavy mud-like consistency that's neither too thick nor too runny. Make sure not to add too much water, or you'll end up with runny mortar, which won't work. The mortar should be firm but workable consistency. When turned on edge the mortar should stick to the trowel.

Mortar Ingredients:

1 part type S masonry cement to 2-3 parts fine masonry sand.

IMPORTANT: For dry-stacking installation, we recommend adding a bonding agent to above mixes.

A HELPFUL TIP: Mortar Colors - For best finished appearance, tinting the mortar will enhance any stone pattern and help hide joint lines on dry stacked stones. Ask your dealer for mortar tinting colors.

Note: Weather conditions should be considered. If stone is being applied in hot or dry weather, the back of each piece should be moistened with a wet brush or a fine spray of water to prevent excessive absorption of moisture from the mortar. If installed over concrete, masonry or scratch coat substrate, the substrate surface area should be dampened before applying mortar.

STEP 7

LAYING THE STONE

This is the fun part, as you begin to lay the stones and watch your creation come to life.

a) Start with the corners

Mortar and stone can be applied either from the bottom up or from the top down. Working from the top down may help avoid splashing previously applied stone with the mortar. Starting from the bottom install corners first. Corner pieces have a long and a short return, these should be alternated in opposite directions on the wall corner. Lay 2 LF corner stones on each side of the wall then lay flats working from outside to the centre. Continue with 2 more LF of corners and so on until the job is complete.

As you work, we suggest you apply a 1/2" - 3/4" layer of mortar to the stone, then set the piece onto the wall. Avoid using excessive mortar or allowing it to spill onto the front of the stones, since removing mortar can be difficult and time consuming.

Anything dry-stacked or tight fitted should always be installed from the bottom up.

b) Laying flat stones:

Dry Stacked:

When installing the first flat stone using a masons trowel apply a 1/2" thick even layer of mortar to the entire back of the stone. Starting next to the corner stone approximately 1" above where you want the stone to be placed, wiggle the stone back and forth, side to side while pushing the mortar around the edges and stone down into place. Push the stone firmly while wiggling slightly to ensure a good bond. 1/2 inch of mortar should be left between back of stone and scratch coat. After setting each stone, clean off excess mortar with a trowel before it sets and fill any holes along the exposed edges of the stone. This will help with tighter fitting joints when applying the next stone and a good seal to the wall. Continue moving horizontally across and up changing the stone size to stagger the joint lines both vertically and horizontally. If mortar accidentally gets on the stone face,

do not wipe it off as it will smear and stain the stone. Let the mortar set until dry and crumbly and then brush off (and clean stone with a solution of 1 part vinegar and 5 parts water).

Flat Stones 1/2" Grout

You may install from bottom up or top down. If corners are used, apply them by alternating the long and short return. Apply the mortar 1/2" to 3/4" thick to the back of the stone. Lay your first stone approximately 1" above where you want the stone to be placed, pressing firmly, wiggling the stone down into place and squeezing the mortar out around the edges. Repeat the procedure across the wall working toward your lines level and plumb, and your joints not exceeding 1/2". Avoid long and straight joint lines.

TIP: When installing irregular shaped stones, start installing the larger stones first. Then fill the openings with the smaller irregular shaped stones.

Trim Stones/Sill

Install sills when all the stone has been laid and set. The top row of stones should be the thickest stones to help support the sill. We suggest adding a bonding agent to the mortar when installing the sills to get a strong bond.

Grouting

With the stones now set in place, it's time to finish sealing and raking any joints that aren't perfect. Using the same mortar used for applying the stone, fill a grout bag or jointing tool and fill in any remaining holes around each stone to ensure the entire area is sealed with mortar. Next, remove any excess mortar, with jointing tool and brush before drying is complete. Finishing the joints

When the mortar joints become firm (30 – 60 min) depending on drying conditions, take a wooden stick or metal jointing tool to rake out excess mortar while compacting the mortar at the same time sealing the edges around the stones. Be careful not to do it too early or the mortar will smear. A thumbprint firmness is a good dryness. Now with the mortar dry to touch, clean up any loose mortar with a whisk broom.

STEP 8

CLEANING UP

If mortar spills or smears onto the stone, it's easy to remove with a whisk broom or dry bristle brush once the mortar has begun to dry and is crumbly.

If the mortar is completely dry and can't be brushed off, use a mixture of one part vinegar to five parts water with a stiff bristle brush or sponge to remove cement or grout stains.

** CAUTION: Never use acids or solvents for any cleaning purposes.*

STEP 9

SEALING

Sealing the stone is not necessary, in dry conditions however it should be in areas where water runs off decks, balconies, leaky gutters or in smoky locations to prevent marking the stone. Just remember that while a sealer protects the stone, it will also darken the stone! Only good quality breathable masonry sealer should be used