PANEL AND PLANK INSTALLATION
(Read Prior to Installation)

The Realstone Systems™ is a joint less / dry-stacked installation where panels and corners fit tightly together without grouted joints.

The following are installation guidelines. The information provided here is intended to be general only. It does not purport to be comprehensive. You should not act on the basis of the information contained below without obtaining qualified advice from a licensed professional.

RECOMMENDED MATERIALS

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<td><a href="http://www.tecspecialty.com">www.tecspecialty.com</a></td>
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Please contact these companies to determine which of their products are appropriate for your specific project and for installation assistance including detailed drawings. Always refer to local building codes and the Tile Council of America (TCNA) for up to date installation practices and methods. Visit the Realstone Systems™ website at www.realstone.com for additional information including ASTM test results, product specifications, pictures, dealers, contact information, Product Disclaimer and Limited Warranty.

WEATHER RESISTANT BARRIER: (WHERE REQUIRED)
All exterior surfaces require a water/weather resistant barrier before installing RSS panels. This barrier must meet local building codes, UBC Standard Code 141 regarding waterproof building paper or asphalt saturated building felt or other methods including liquid applied solutions. Rigid noncorrosive flashing is required for exterior wall use. It is best to consult your local building codes and suppliers for approved and recommended methods.

LATH OR WIRE MESH: (WHERE REQUIRED)
Install a 2.5 lbs. diamond mesh expanded metal lath or an 18 gauge woven wire mesh: Exterior applications will require a galvanized metal lath, however a non-galvanized black metal lath may be used for interior applications. Overlap lath sides by not less than 3/8” and lath ends by not less than 1 inch. Attach the lath using galvanized nails or staples 6 inches on center and 16 inches horizontally, penetrating studs to a minimum of 1 inch. Continuously wrap metal lath a minimum of 16 inches around all outside and inside corners.

SCRATCH COAT (WHERE REQUIRED)/SETTING MATERIALS:
Apply a 1/4” thick scratch coat of polymer modified tile thinset or medium bed mortar which meets or exceeds ANSI 118.4 and 118.11 adhesion standards -SEE RECOMMENDED SETTING MATERIALS ABOVE. They are generally available from the same retailer where Realstone™ products are purchased. Tile thinset or medium bed mortars are rated for both interior only and interior / exterior work, so it is important to use a thinset or medium bed mortar meeting the requirements of your installation.
PREPARATION OF SURFACE (SUBSTRATE)
Natural stone tiles are heavy; therefore it is important that they are adhered over only appropriate substrates. Realstone Systems™ products may be applied over any prepared masonry/cement surface such as cement board, concrete block, brick, cement, or lathe & scratch coat combination. DO NOT INSTALL OVER DRYWALL OR SHEETROCK. Painted surfaces must be mechanically abraded so as to remove all bond breakers, or otherwise stripped of paint or other covering before installing. The substrate and wall should be structurally capable of supporting the weight of the product. The fibrous cement board must be a minimum of ½ inch thick to support the weight of these products and should be securely fixed to the wall’s framework. We suggest that the board should be glued and screwed to the frame, screwing at 24 inch centers using screws that are a minimum of 2 inches long and covering the entire frame, where contact with the cement board is made, with a good quality mastic type adhesive. To ensure safety and strength this work should only be done by a qualified and licensed builder and per local building codes.

1. CLEAN
Always make sure that the surface that RSS will be applied to is clean and free of all loose material and dust. Surfaces to be faced must be structurally sound and comply with local building codes.

2. WEATHER RESISTANT BARRIER: (WHERE REQUIRED)
All exterior surfaces require a water/weather resistant barrier before installing RSS panels. This barrier must meet local building codes, UBC Standard Code 141 regarding waterproof building paper or asphalt saturated building felt. Rigid noncorrosive flashing is required for exterior wall use.

3. LATH OR WIRE MESH: (WHERE REQUIRED)
Install a 2.5 lbs. diamond mesh expanded metal lath or an 18 gauge woven wire mesh: Exterior applications will require a galvanized metal lath, however a non-galvanized black metal lath may be used for interior applications. Overlap lath sides by not less than 3/8 in. and lath ends by not less than 1 in. Attach the lath using galvanized nails or staples 6 in. on center and 16 in. horizontally, penetrating studs to a minimum of 1 in. Continuously wrap metal lath a minimum of 16 in. around all outside and inside corners.

4. SCRATCH COAT OR SKIM COAT (IF NECESSARY):
Mix the appropriate tile thinset or medium bed mortar to a creamy consistency for a minimum of 5 minutes or as per manufacturer’s instructions. When installing Realstone™ products apply a ½ inch thick scratch coat of polymer modified tile thinset or medium bed mortar which meets or exceeds ANSI 118.4 and 118.11 adhesion standards (SEE RECOMMENDED SETTING MATERIALS ABOVE). Apply the tile adhesive to the wall using a square notch trowel as would normally be the application method used for laying tiles. Note – If applying a scratch coat to lath or wire mesh the scratch coat should dry for at least twenty four (24) hours.

5. RSS PANEL:
Always make sure that the back of each RSS panel is clean and free from stone dust. This can easily be done by wiping the back of the panel with a damp rag. Cutting RSS panels will create dust and should be worked on outside. Clean the back of all panels after cutting them. Only cut RSS Panels with a wet saw with a carbide or diamond tip blade. Do not mark the surface of the stone with a permanent marker as this will be absorbed by the stone and cannot be removed.
Moisture Management:
Moisture Rich Environments – It is important that a waterproofing membrane meeting or exceeding ANSI 118.10 & 118.12 standards be applied between the substrate and tile adhesive to form a waterproof barrier.
Freeze / Thaw Climates – It is critical that a waterproof / anti-fracture membrane meeting or exceeding ANSI 118.10 & 118.12 standards be applied between the substrate and tile adhesive to form a water and fracture proof barrier, capable of resisting substrate movement during freeze-thaw cycles.

INSTALLATION OF RSS PANELS:

1. Always follow and check your local building code requirements. Realstone™ should only be applied to structurally sound surfaces incorporating good building practices. Please note that the assistance of a professional contractor or engineer may be needed to evaluate your installation or the soundness of your installation back up wall. A contractor or engineer can also provide important information regarding local building codes, seismic building codes, institutional building codes and installations.

2. Install the corner pieces first. Start from the bottom and work up. The corner pieces come in 8” and 16” lengths. You should alternate these in opposite directions on the corner. It is also recommended to lay out the Realstone™ Panels to make sure that the pattern will meet your needs.

3. Apply Thinset or medium bed mortar / Medium bed mortar. Always use a generous amount of the recommended polymer modified tile thinset or medium bed mortar and apply it to the back of each tile. Tile thinset or medium bed mortars are rated for both interior only and interior/exterior work, so it is important to use a thinset or medium bed mortar meeting the requirements of your installation. It is important to skim coat or back butter the entire back of all panels completely to ensure full coverage. Thinset or medium bed mortar must also be keyed into the substrate with the flat side of a square notch trowel. Then make horizontal grooves on the substrate before pressing the panel into place on the wall.

4. Secure the stone to the wall. The stone needs to be pressed firmly against the scratch coated wall to ensure a sound bond. Make sure that all gaps, voids and cracks are filled. This is critical to ensure that a strong bond is formed with the wall. Setting the panels should cause thinset or medium bed mortar to be freely forced out around the edges of the panels. Wipe the thinset or medium bed mortar off the stone making sure that there aren’t any voids around the edges of the panels. It is also important to start on a level surface and maintain a level line throughout the installation. It is suggested to keep the stonework free from mortar dropping and mortar smears as much as possible. Mortar droppings can be removed with a damp cloth.

5. Wetting the stone and substrate. Under certain conditions, the stone and substrate may need to be wetted. If the stone is being installed onto a very hot /dry surface or in a hot/dry climate, the stone and wall surface should be wet to prevent excessive absorption of moisture from the mortar. This can be done by spraying water on the wall surface and back of stone.

6. Lay the panel in an offset fashion. I.e. different lengths of panels and staggered joints as this will reduce the appearance of the vertical joints.
7. **Cold weather installations.** Applications should be protected from temperatures below freezing, so the mortar may set up properly as recommended in section “2101.3 Cold-weather construction” of the International Building Code.

8. **Cleaning.** Excess dirt and film may be removed using clean water and a stiff brush. It is important not to allow thinset or medium bed mortar to dry on the face of the stone. Remove it prior to it hardening. DO NOT USE ANY TYPE OF ACID. Certain stones may oxidize and could bleed with exposure to moisture. This generally stops once these minerals have all oxidized. It is best to use clean water, soap, and brush to clean the stone and surrounding area.

**PLANK INSTALLATION**

For a dry stack installation of the planks follow the same procedure as panel installation. If your project will include grout lines, the spacing of the planks will need to be determined according to the desired look you are seeking. Spacers similar to what is used in standard tile installation are recommended. Once the planks are installed and thinset or medium bed mortar is dry, you can proceed to grout with standard sanded grout in the color of your choice.

**COMPLETION**

1. Stone is a natural product that “breaths”. It does absorb oil, water and other substances that are in contact with the stone. Sealing is not necessary but may be desirable for attaining deeper and enhanced colors. Sealants are recommended for interior use where water, oil, food stuffs may be in contact with the stone.
2. The sealer should be tested on small loose “trial” pieces prior to a large area application.
3. It is important to prevent any vibration or hammering of the wall for a period no less than 24 hours after the stone has been applied to prevent the possibility of compromising the adhesion of the stone to the wall.

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The information contained in this document and all Realstone Systems™ documents is subject to change at anytime. Please refer to the Realstone Systems™ website for additional information including the Product Disclaimer and Limited Warranty.