

INTRODUCTION

Due to their large format and slim profile, Gauged Porcelain Panels (GPPs) require specialized handling and installation techniques. This guide provides best practices for successful installation, covering tools, adhesives, cutting techniques, and handling methods.

REQUIRED TOOLS & EQUIPMENT

1. Handling & Transport

- Suction Cup Lifting Systems: Used for secure transport and placement.
- Frame Transport Carts: To prevent flexing and breakage.
- Protective Gloves: For safe handling.
- Foam or Rubberized Work Surface: To support panels during fabrication.

2. Fabrication

- Score & Snap Cutters
- Rail Saw
- Waterjet Machine
- Angle Grinder with Diamond Blade
- Edge Polishing Pads

3. Installation Tools

- Notched Trowels: For full, proper adhesive coverage. Consider 3/8" or 1/2" U-Notch
- Thin-Set Mortar & Adhesive: High-performance polymer-modified adhesives recommended - ANSI A118.15 Compliant.
- Vibrating Suction Leveling Tools: Ensures full mortar coverage
- Tile Leveling Clips & Wedges: To prevent lippage.



SURFACE PREPARATION

Proper surface preparation is critical for successfully installing Gauged Porcelain Panels (GPPs). Ensuring a stable, level, and clean substrate minimizes the risk of bond failure, cracking, or lippage. Follow these best practices to achieve optimal adhesion and long-term durability.

- 1. Substrate Flatness:** Must not exceed 1/8" variation in 10 feet.
- 2. Substrate Material:** Acceptable substrates include:
 - Cement Backer Board (ASTM C1325-Compliant)
 - Properly prepare concrete slabs.
 - Approved exterior sheathing for ventilated facades.
- 3. Dust & Debris Removal:** Ensure the surface area is clean before installation.

CUTTING & DRILLING BEST PRACTICES

- 1. Straight Cuts:**
 - Use a score and snap cutter for straight-line cuts.
 - Score deeply along the entire length before snapping.
 - For a cleaner break, use a straightedge guide.
- 2. Circular or Custom Cuts**
 - Use a waterjet cutter for high-precision custom shapes.
 - When using an angle grinder, make multiple light passes.
 - Support the panel fully during cutting to avoid stress fractures.
- 3. Drilling Holes**
 - Use a diamond core drill bit at a low speed with water.
 - Start drilling at an angle, then level the bit to avoid chipping.

ADHESIVE APPLICATION & SETTING

1. Adhesive Selection:

- Use a polymer-modified thin-set mortar compliant with ANSI A118.15.
- For exterior applications, use epoxy or polyurethane adhesive where required. substrates include:

2. Troweling Technique:

- Apply full mortar coverage using the back-buttering technique.
- Use a notched trowel (3/8" - 1/2") to spread mortar evenly.
- Comb mortar in one direction to ensure air escape.

3. Panel Placement & Bonding:

- Use suction cups for positioning without excessive force.
- Apply pressure evenly using a vibrating leveling tool.
- Use leveling clips and wedges to maintain even spacing.

JOINT CONSIDERATIONS

1. **Grout Joints:** Minimum 1/16" wide to accommodate movement.

2. **Expansion Joints:** Follow industry standards:

- Every 8-12 feet for interior floors.
- At perimeters, transitions, and changes in plane.

3. **Sealants:** Use flexible silicone sealant for movement joints.

HANDLING & STORAGE

Proper handling and storage of GPPs are essential to prevent damage before installation. Panels should always be stored vertically with full support to maintain their structural integrity. To avoid surface contamination, keep the panels covered and protected from dust and debris. When moving panels on-site, ensure that two or more installers transport them carefully to minimize the risk of breakage or flexing panels.

FINAL INSPECTION

Before applying grout, conduct a thorough pre-grout check to ensure full mortar bonding and proper adhesion. Once the installation is complete, clean the panels using pH-neutral cleaners and non-abrasive pads to maintain their pristine appearance. To prevent damage during ongoing construction, cover installed panels with protective materials until the project is finalized.

CONCLUSION

For additional technical details, installation consultation, or related information, we will be happy to assist.

Please contact your dedicated project coordinator or email us at info@creativematerialscorp.com.

