

# STEALTH Installation Guide: Rooftop Concealment

*Before starting to assemble, please check the packing list.*

## **General Procedure**

The recommended procedures listed below are common to the majority of STEALTH'S rooftop installations. Since every site is different, it is the responsibility of the general contractor to determine the actual sequence and procedures used and to insure that the necessary safety precautions are taken.

### **1. Thoroughly Review the STEALTH Drawings.**

- The most updated drawings are included with the packing/shipping documents.
- If for some reason you did not receive drawings, please contact STEALTH (800-755-0689) prior to starting any fabrication.

### **2. Handle Stealth Materials with Care**

- Take all applicable safety precautions for the specific job site.
- Carry StealthSkin™ panels by the top or bottom, not the edge. Carrying panels by the edge or edge groove can cause the panels to separate or delaminate.
- Tarp materials on site specifically finished surface materials such as stucco and brick. **Failure to do so may cause discoloration.**
- Bumping or scratching the panels may damage the factory applied surface texture or paint.
- Note that the numbers on individual pre-fabricated parts, reference numbers on STEALTH drawings.

### **3. Start with a Level Surface**

- Complete all necessary under-roof preparation required.
- Check attachment locations with a water level or equivalent to insure they are at the same elevation.
- Pre-fabricated pieces **WILL NOT** fit together without modification if the mounting surface is not level.

### **4. Install Columns**

- STEALTH column structures are typically galvanized steel.
- Layout columns per the footprint dimensions on the drawings that are provided and attach to the roof or above-roof support structure per the engineered attachment design. **STEALTH does not typically supply the roof attachments.**

### **5. Install Remaining Support Structure**

- See drawings for placement of the remaining support structure parts & size of fasteners to be used.
- Cross-bracing between columns & knee braces are typically galvanized steel.
- Horizontal panel attachment girts are typically FRP (Fiberglass Reinforced Plastic).
- The FRP girts typically run around the perimeter of the structure at the top and bottom of the StealthSkin™ panels.
- If field fabrication is necessary, use FRP fabrication techniques described below.
- Align bolt-holes of adjacent parts and bolt together with supplied hardware.
- Be sure to reference drawings to insure the proper fasteners are used.

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### 6. Install the StealthSkin™ Panels

- StealthSkin™ panels are typically through-bolted to horizontal steel or FRP girts at the top and bottom of the panel (10'-0" vertical span maximum).
- Holes in panels are typically field-drilled using the following procedure.
  - Starting at the corner of the structure, hold the proper StealthSkin™ corner panel in place using C-clamps or an appropriate fastener.
  - Insure that the panel is installed plum & level.
  - Mark or drill (if possible) the necessary holes through the StealthSkin™ panels, using the pre-fabricated holes in the STEALTH FRP girts as a guide.
  - Panels 4' & 5' wide use 3/8" fasteners, three at the top and three at the bottom. One bolt in the center and one bolt 6" from each edge, with a 1 1/2" minimum edge distance from top and bottom of panel.
  - When drilling thru the STEALTH panels for a 3/8" bolt you will need to oversize the hole 1/8" to all for expansion and contraction.
  - When bolt head or nut bear directly on StealthSkin™ surface, **tighten bolts only 1/2 turn past snug** (use thin bead of epoxy to lock nuts into place).
  - After the first panel is bolted in place, slide a provided "foam spline" into the vertical edge groove(s) on the side of the panel.
  - Hold the adjacent panel in place in a similar manner as the first (with C-clamps or other device), sliding the spline into the new panel's vertical edge groove.
  - Drill and bolt the new panel in place as described above.
  - Continue the above steps around the perimeter of the concealment structure until all the provided panels are installed.
- **Please Note: Over-tightening clamps or bolts will damage panels.**
- **Under no circumstances are non-approved fasteners such as drywall screws to be used for panel attachment.**

### 7. Install Panel Edge Cap on Exposed Foam Edges

- Slide edge cap over all exposed foam edges (except bottom edge, unless otherwise noted), trimming if necessary.
- Orient breaks between edge caps so they are **NOT** directly over joint between the panels to insure maximum water protection.
- Drive provided TEX screws through the back edge of the panel cap (into the plastic skin of the panel) on 12" centers to hold the cap in place.

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### 8. General Handling & Fabrication Tips

The following general guidelines should be used when handling or fabricating STEALTH materials to insure maximum performance and longevity of the materials.

#### A. Handling/Storing StealthSkin™ Panels

- Carry panels from the bottom, not the edge. Carrying panels by the edge or edge groove can cause the panel to separate or delaminate.
- Avoid setting StealthSkin™ panels on the grooved edge.
- Keep panels in the shipping crate and tarp materials while onsite or storing outside prior to install. STEALTH recommends storing in a cool & dry warehouse until ready to install.
- Insure that the top of the vertical joints between panels are covered after installation to keep water from getting between the panels (**refer to #7 install of edge cap on exposed foam edges**).

#### B. Cutting or Drilling StealthSkin™ Panels

- StealthSkin™ panels can be cut with a table saw or circular saw using a high-quality carbide tip saw blade. A “triple chip” blade is recommended.
- Drilling can be accomplished with any high quality metal drill bit. If installing STEALTH reflective (acrylic) panels, broad-tipped bits work best.

#### C. Cutting or Drilling FRP Structural Members

- FRP is easy to drill and cut with conventional tools, but be aware it is hard on cutting edges and causes blades and drill bits to dull rapidly.
- Masonry drill bits and diamond blades are recommended for high-volume use.
- For high-speed cutting such as use of a circular saw or table saw, protection from dust **MUST BE USED**. The appropriate dust masks or ventilators are essential. Band saws can capably cut FRP, and do not produce nearly as much dust as circular blades.
- It is essential that all cut or drilled edges of FRP products be sealed with a high quality sealant (Hetrolac or equivalent) after fabrication. If the edges are not sealed, FRP will pull apart and “fiber bloom” over time.

#### D. Painting STEALTH Materials

- STEALTH recommends that the StealthSkin™ panels, cylinders, and/or FRP be painted using urethane-based paints (Sherwin Williams “Corothane” or “Polane”, Carboline “Carbothane 133”, or equivalent). These are two-part paints which may not be desirable in some field-painting cases.
- If conditions do not permit urethane-based paints, it is also acceptable to prime the surface with a high-quality acrylic-DTM primer and a top coat of 100% acrylic paint (Sherwin Williams “Superpaint” or equivalent).

**This manual is designed to assist in a typical rooftop installation. Your installation may vary. The general contractor should take all necessary precautions to insure that the proper installation steps are taken for the specific job site, which includes a pre-construction conference call with STEALTH.**

**CONGRATULATIONS! You have successfully installed a typical rooftop concealment. If you have any questions or comments, please feel free to contact STEALTH at 800-755-0689.**



6549 Fain Boulevard  
North Charleston, SC 29406  
www.stealthsite.com