



## VIRTUAL POLYMER COMPOUNDS, LLC

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# Fiberglass Palmer Bowlus Flume Installation Recommendations and General Notes

1. Remove flume from shipping crate and carefully examine flume to insure that it has not been damaged in transit. If damage is noted report to freight company and Virtual Polymer Compounds, LLC at once.
2. Installation of this flume requires a level base of concrete or suitable building material. Consult local project Civil Engineer for specifications and directions on base construction. Best results have been experienced with a structural base of reinforced concrete that has been poured, allowing for a minimum of 6" clearance between the lowest portion of the flume and the structural base.
3. Prior to installation the flume should be internally braced using standard plywood and spreaders. Actual size, spacing and number of plywood sheets and spreaders will vary depending on the flume size. Adequate bracing is required to support flume from the external load of concrete or grout used to place the flume. Flumes can be ordered with internal bracing in place for a nominal additional cost. If bracing is installed in the field, care must be taken to avoid damage to the interior surfaces of the flume. Should damage occur, contact Virtual Polymer Compounds, LLC for further instructions.

Note:     *Until such time as the space between the flume floor and the base is completely grouted or filled with concrete, the flume will not support a load. Do not stand on the interior floor of the flume.*

4. Each flume is supplied with clip anchors that are used to tie the flume to the concrete reinforcing or special anchors. These ties should be made with PVC coated number 8 tie wire. All ties should be made before the floor of the flume is grouted.
5. The space between the flume floor and the concrete base should be completely filled. For best results use a high strength, zero shrink grout. This grout must be mixed to a flowable state.
6. Grout should be allowed to cure to a strength that will support additional load and maintain its bond to the base. Consult the project Civil Engineer for specifications on the type, placement and cure time of the grout. If the area to be filled is too large to fill with grout, then a base fill of concrete can be considered. Contact

Virtual Polymer Compounds, LLC for additional information regarding this application.

7. The floor grouting should be poured only to the depth of the highest elevation of the floor plus 1/2". Do not try to grout the floor and wall void at one time.
8. Once the floor void grout is cured the interior floor of the flume can be counter weighted to avoid hydraulic rise while grouting the flume wall.
9. The flume walls are to be grouted in the same manner. Depending on the depth of the flume, the wall may require multiple lifts. Consult project Civil Engineer for hydraulic lift and grouting instructions.
10. Finish exposed grout surface to desired texture.

*Disclaimer: Virtual Polymer Compounds, LLC provides these procedures as a guideline for installation. Each project has its own special requirements. Services of a Civil Engineer are required for complete engineering of the project installation. Installation of the equipment and failure relating to installation are not the responsibility of Virtual Polymer Compounds, LLC*

- A. The coating on the interior surface of the flume is known as the "gel-coat". It is important that this coating remain intact to protect the unit from UV exposure and water damage over a period of time. This coating should become damaged, protect the flume from the weather and contact Virtual Polymer Compounds, LLC for repair procedures.
- B. Most flumes are self-scouring by design, the smooth fiberglass surface aids in this cleaning. Cleaning of the flume can be accomplished with standard household cleaner and a brush.
- C. Flumes should be stored in their shipping crate until installation. This will protect the flume and help it hold its shape until it is in a fixed and supported location. Do not stack flumes or equipment on the flume.
- D. For the flume to function correctly the project Civil Engineer's elevation must be observed.
- E. Care should be taken during installation to insure that the flume walls are not distorted due to grouting. Pouring concrete or grout with too great a drop and over vibration are two common causes of wall distortion.