

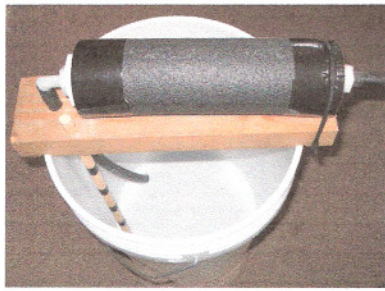
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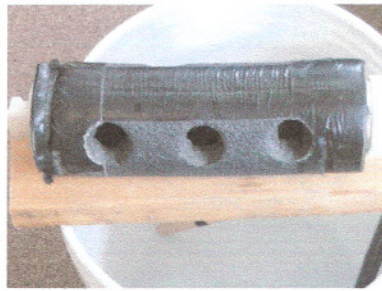
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Low Volume Flow Cell

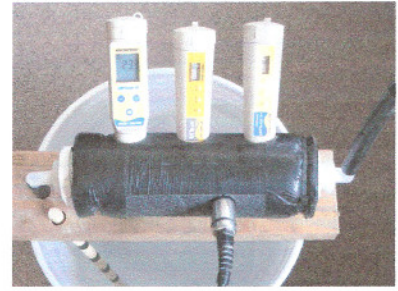
An inexpensive low volume flow cell can be made of 1-1/2" closed cell foam pipe insulation and standard PVC pipe fittings. The flow cell is mounted on a 2x4 and sits on a 5 gallon pail. The 2x4 is grooved to fit the rim of the 5 gallon pail. The flow cell setup supports a depth gauge (1/2 inch dowel) marked in increments of 1 gallon for use in the 5 gallon pail (bottom edges of black tape). The user cuts holes in the foam to hold water quality meters (pH, EC, ORP, etc.). Holes not in use can be closed with duct tape. When the 5 gallon pail is full, and with the purge pump running, the flow cell is lifted off the full pail and placed on an empty 5 gallon pail. With this method, flow is not interrupted and flow volume increments at which meter readings are to be taken are easily monitored using the depth gauge. Inlet configurations for 1/4 inch and 1/2 inch tubing are provided. The photographs below illustrate the flow cell setup.



Uncut cell with depth gage



Cell with instrument ports



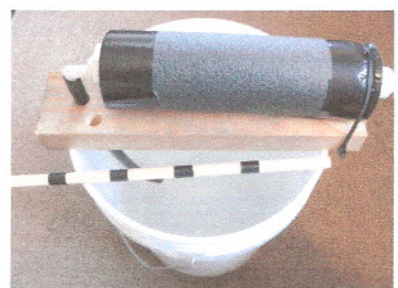
Cell with instruments in ports



Flow cell in use with Rotapump™



Flow cell with 1/4" inlet



Removable depth gage

1 gal = 2+15/16"

2 gal = 5+11/16"

3 gal = 8 + 5/16"

4 gal = 10 + 7/8"

All parts are replaceable at your hardware store.

To build a cell, the following components are needed:

- 10" long section of pipe foam reinforced with black duct tape
- 13-1/2" long 2x4 with grooves to fit pail rim and 1/2" holes for discharge tube and depth gage
- Two 1-1/2" smooth by 3/4" thread PVC bushings for end caps
- Two 3/4 male thread by 1/2 barb elbow for 90 degree inlet and outlet tubing
- One 3/4 male thread by 1/2 straight barb for straight inlet tubing
- One 3/4 by 3/8 threaded bushing
- One 3/8 thread by 1/4 insert barb
- Nylon ties to hold foam to 2x4