



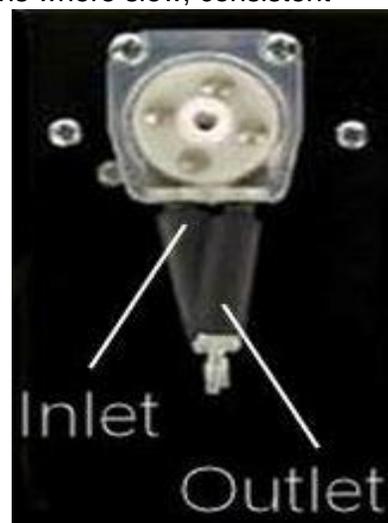
## Understanding and Operating Your Peristaltic Dosing Pump

Buckeye's Peristaltic Dosing Pumps (PDPs) are designed for applications where slow, consistent dosing of fluids is called for. The pumps are often used in the delivery of calcium and alkalinity supplements. The PDPs are supplied with 10 feet of tubing and a graduated cylinder.

Begin by identifying a location to mount the pump close to the reservoir/container of supplement and the location to which the supplement will be delivered. Although the pumps will self-prime up to 20 feet from (above) a reservoir, it is best to limit this distance to a few feet. Likewise, the pumps will pump fluid more than 20 feet vertically, but will move more fluid with less head pressure. Horizontal runs of tubing up to about 100 feet are possible.

With the PDP mounted, attach the supplied tubing to the fitting on the inlet (left) side of the pump. Run this tube to the bottom of the reservoir, and cut the tube. The tubing supplied with the pump is designed to attach to the pump fittings without the need for clamps.

Use small zip ties for added security if desired. Attach the tubing to the fitting on the outlet (right) side of the pump, and extend the tube to its intended outlet location. Consider placing the outlet in a location where turbulence will aid in mixing. Assure that both the inlet and outlet tubes are not kinked.



Plug the pump in to a standard 110 volt AC wall socket. The pump will rotate in a clockwise direction. You'll see fluid slowly being drawn into the intake tube at a rate of less than 1/2" per compression of the tube – it may therefore take an extended period of time for the fluid to travel the full length of the intake and outlet tubes. When fluid reaches the end of the outlet tube, you'll see a drip approximately every 3 seconds.

Once fluid is dripping from the end of the outlet tube, place the end of the tube in the graduated cylinder and identify the amount of fluid delivered by the PDP in 10 minutes. Divide that number by 10 to calculate the dose delivered by the pump in 1 minute. The graduated cylinder is marked in milliliters (ml). For example:

Fluid delivered in 10 minutes: 15 ml.  
 $15 \text{ ml} / 10 = 1.5 \text{ ml} / \text{minute}$

Control the amount of time the pump runs to control the dose. The daily duration of run time for the pump can be controlled manually (by plugging in, and unplugging the pump); or automatically (with a digital appliance timer).

Over time, the tubing compressed by the PDP rollers will wear out and will need to be replaced. If the PDP runs for up to several hours per day, expect to replace the compressing tube approximately once per year. Compression tubing that needs to be replaced will be indicated by reduced flow.