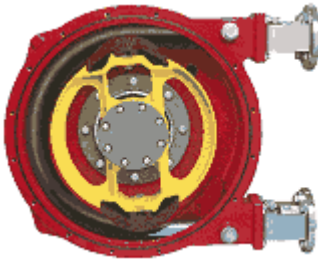


Hints and tips - pump installation



- Do keep delivery and suction lines as short as possible.
- Do use the minimum number of bends in rigid pipe runs. If there must be a bend use a swept bend and not a tight elbow.
- Do use suction and delivery pipelines with a bore equal to or larger than the tube bore fitted in the pumphead. When pumping viscous fluids, the losses caused by increased friction can be overcome by using pipe runs with a cross sectional area several times greater than the pumping element.
- Do run at a slow speed when pumping viscous fluids.
- Do use largest bore tube running at slow speed for longest tube life.
- Do not fit valves in the suction or delivery line without considering that peristaltic pumps are self-priming and will hold their prime up to several metres, so there may be no need for non-return or foot valves, nor loading valves used on many other kinds of pumps.
- Valves when fitted must cause no restriction. If electrically actuated valves are fitted, they should be interlocked so that the pump will only run when the valves are open. Fit an automatic bypass if manual valves are installed.
- In sterile or long running applications, a useful hint is to fit an extra length of pump tube in the system so that you can move the tube along from time to time, without needing to break the pumping circuit.

Reference:

<http://www.watson-marlow.com/wmb-gb/p-hints.htm>

Installation tips

- Your Marathon tank is one of the lightest available. There is no need for special equipment or the Olympic Weight Lifting Team to get your Marathon installed.
- Unlike regular tanks, the Marathon can be shipped or moved on its side. Our super strong shell is unaffected by shipping on its side even over hundreds of miles!
- Do not solder directly against the tank! Solder your first connection and then attach it to the tank unions.
- Be sure to properly vent the water heater by opening a hot water faucet until only water comes out before energizing the elements.
- Flushing water mains, broken water mains, and many other water system operations can create extreme vacuums within your plumbing system. Your Marathon comes complete with a vacuum relief valve which must remain installed to protect your tank and system.

If you have a unique application, or installation question, please contact our Customer Service Department at the toll free number below.

Maintenance tips

- In areas of hard water, better performance will be realized by using lower wattage elements. We encourage the use of 3800 watt or lower wattage elements in these applications.
- If you have sediment in your water, Marathon's unique "bowl shape" bottom will allow you to efficiently and easily drain the tank and sediment. Typically drawing off five gallons of water a couple of times of year will flush out the sediment.
- If you encounter severe sediment build-up, the Marathon element ports are oversized to allow a wet/dry vacuum hose to be introduced to clean out sediment. Be sure to turn off power and follow all safety precautions.

Paint, ink, and indelible markers may be easily removed from the polyethylene jacket of the Marathon by using vandalism/stain removers

Reference:

http://www.marathonheaters.com/installation_tips.html