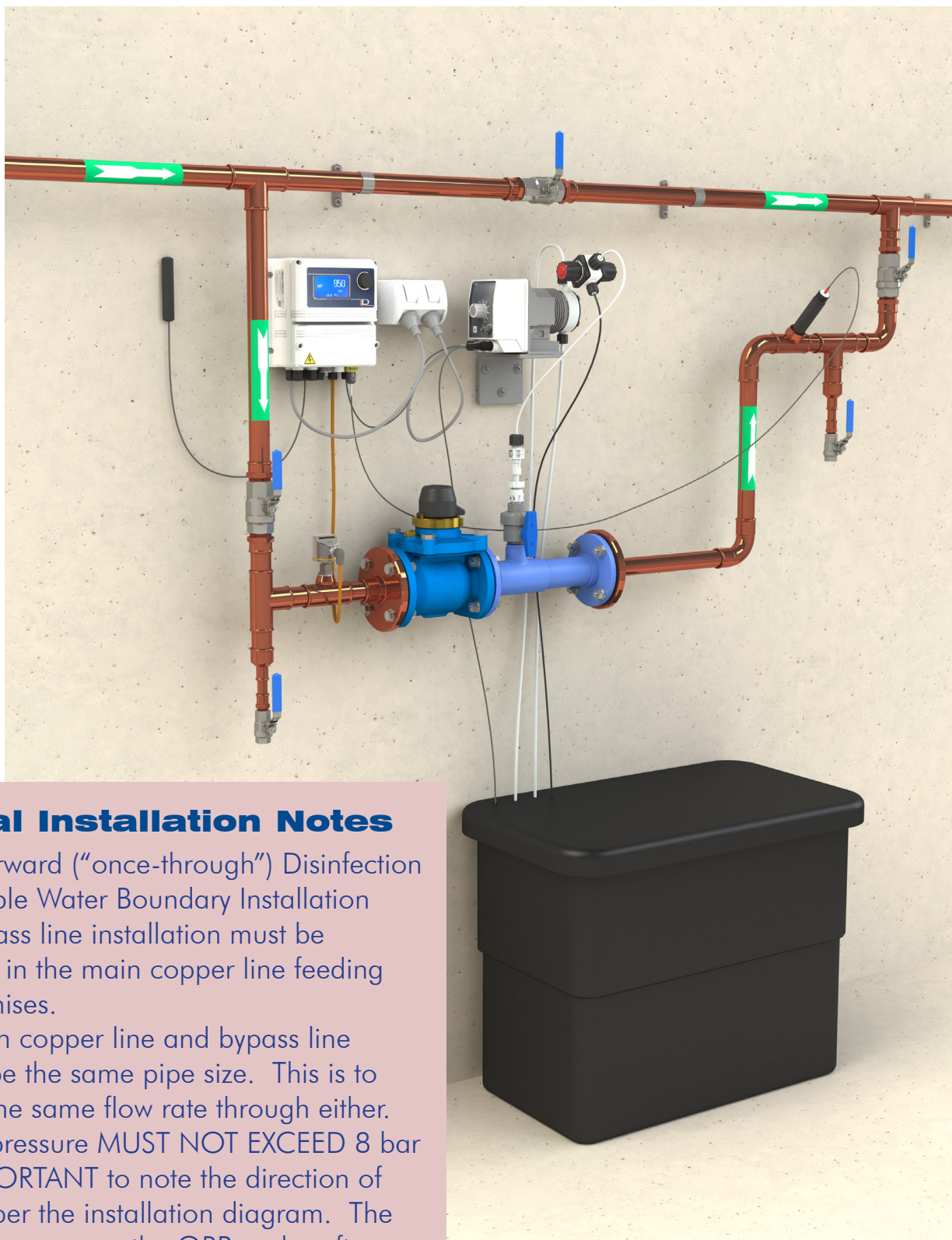
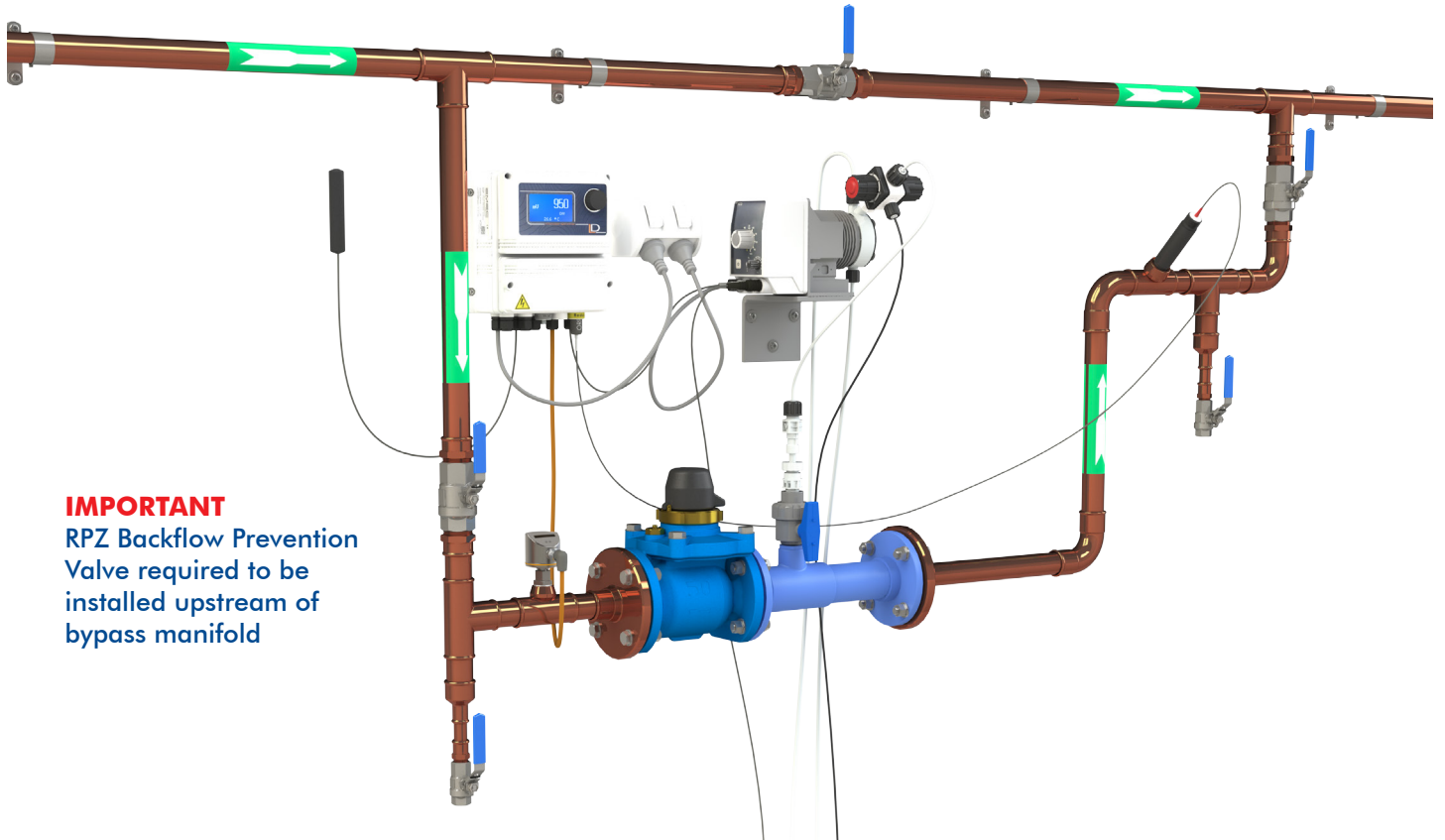


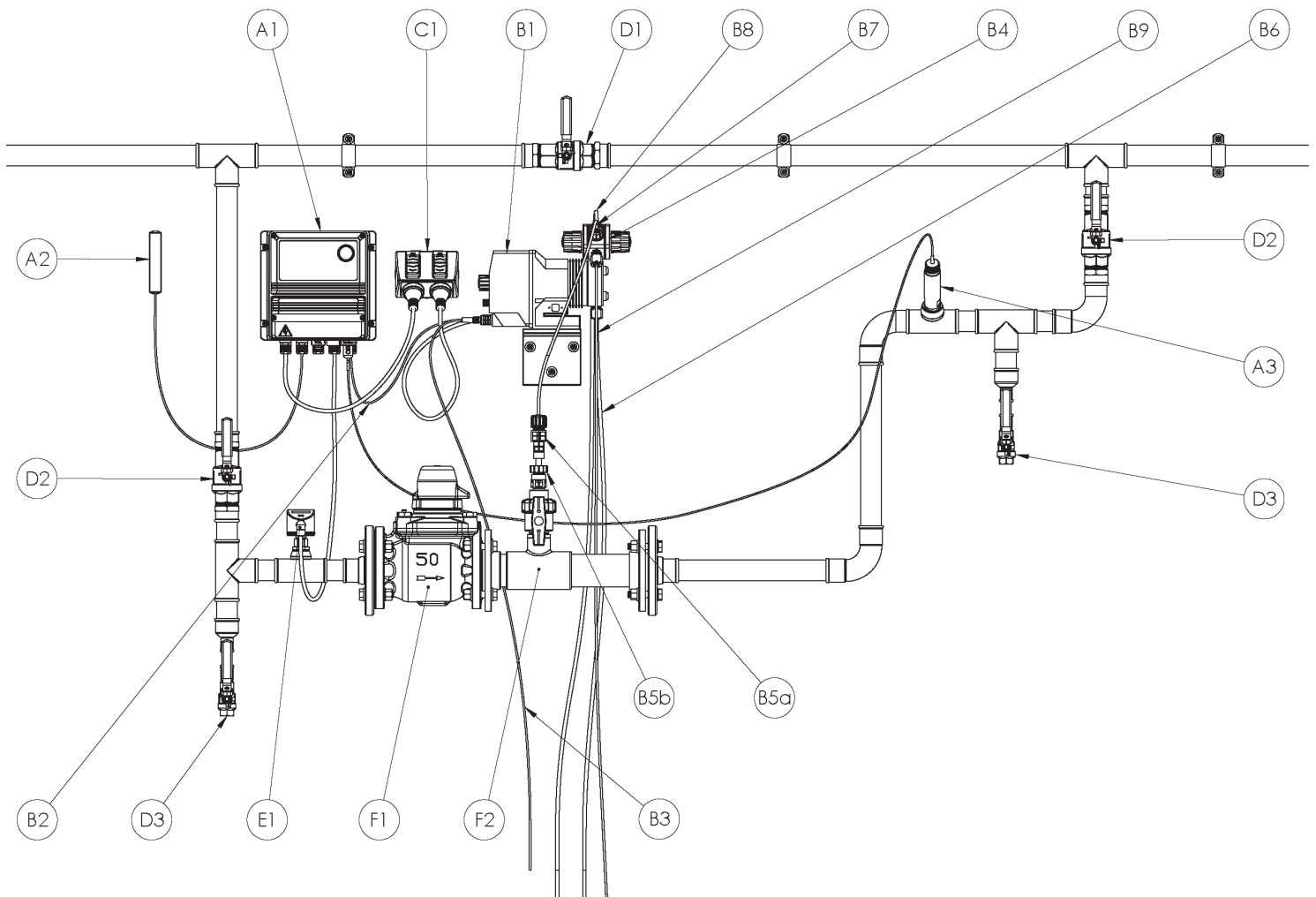


General Installation Notes

- Feed Forward ("once-through") Disinfection for Potable Water Boundary Installation
- The bypass line installation must be installed in the main copper line feeding the premises.
- The main copper line and bypass line should be the same pipe size. This is to ensure the same flow rate through either.
- System pressure **MUST NOT EXCEED 8 bar**
- It is **IMPORTANT** to note the direction of flow as per the installation diagram. The flow always passes the ORP probe after chemical injection.
- RPZ Back-flow Prevention Valve required to be installed upstream of bypass manifold.



IMPORTANT
RPZ Backflow Prevention
Valve required to be
installed upstream of
bypass manifold

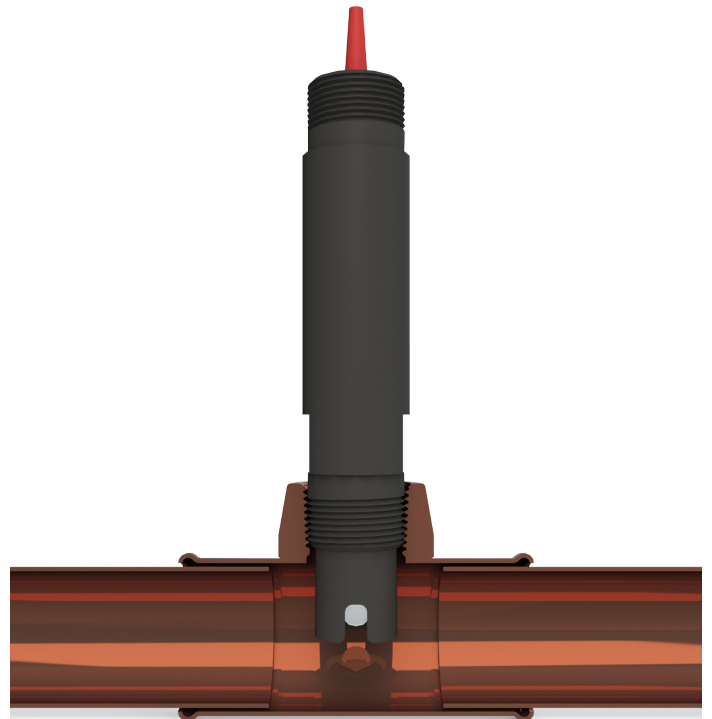


- A1** EMEC LDSRH PLUS ORP Controller which measures mV from the ORP Probe. The mV is related to the amount of Free Chlorine in the water, i.e. the higher the ORP mV reading, the more Chlorine in the water.
- A2** Mount the antenna in a location that provides good signal strength at least 300mm from controller in any direction. The signal strength is displayed on the controller screen (similar to display on mobile phone). NOTE: The antenna does not necessarily need to be adhered to any surface.
- A3** ORP Probe installed with sensing end positioned so that it is just inserted into the flow. Probe has 3/4" NPT Male thread, so a 3/4" NPT Female or 3/4" BSP Female threaded socket is required to screw the ORP probe into. The angle of the threaded port should ideally be approx 30 to 45 degrees from the vertical to allow one to insert and remove with ease. Refer to cross sectional diagram on next page.
- B1** Chlorine Dosing Pump mounted on PVC wall mount bracket. Head can be on the LHS or the RHS, but the head on the RHS make it easier to access the delivery valve which exits the pump head at an angle. De-gassing (self venting) valve at the top of the head exits the head vertically and it is imperative the pump is mounted as shown in the diagram in order for the bubbles in the Chlorine to exit the head vertically. See Pump Face on Next Page.
- B2** Pulse cable from controller that plugs into dosing pump BNC connector INPUT (Connector on the pump is immediately to the RHS of the power lead) and usually has a RED rubber boot on the connector.
- B3** Cable from low level float on the foot valve. This plugs into the pump's RHS BNC connector, i.e. LEVEL input. The foot valve with float at the other end of this cable is inserted into the Chlorine chemical tank
- B4** Multi-function anti-siphon and pressure relief valve fitted to pump delivery valve.
- B5a** Injection lance installed such that the injection end is positioned in the centre of the flow through the Static Mixer. To adjust the insertion depth of the lance, you can loosen the collar at the base, then slide the shaft up or down as desired, and then tighten the collar again. The extension piece supplied may need to be used to achieve the required insertion depth. Refer to cross sectional diagram on next page.
- B5b** A 1/2" BSP female thread is required to fit the lance ball valve into, as the injection lance collar has a 1/2" BSP male thread. The angle of the threaded port should ideally be approx 30 to 45 degrees from the vertical to allow one to insert and remove with ease. The Static Mixer has a 1/2" BSP female thread. Fitment of the ball valve is optional.
- B6** Suction chemical tube 6x4mm (translucent PVDF Kynar) runs from the foot valve in the chemical tank up to the suction valve under the pump head. If you do not have sufficient PVDF tubing left, you can use the soft transparent PVC tubing supplied with the pump's standard accessories.
- B7** Delivery chemical tube 6x4mm (translucent PVDF Kynar) runs from the delivery valve on the angle on the pump head to the injection lance B4. IMPORTANT: DO NOT USE the black PE or soft transparent PVC tubing supplied with the pump's standard accessories.
- B8** De-gassing (self-venting) chemical tube 6x4mm (translucent PVDF Kynar) runs from the de-gassing valve on top of the pump head back to the chemical tank. If you do not have sufficient PVDF tubing left, you can use the black PE or soft transparent PVC tubing supplied with the pump's standard accessories.
- B9** Soft translucent or PVDF tube fitted to pressure relief port on Multi-function valve, which should run back to chlorine tank.
- C1** Dual 240VAC 50Hz 10A GPO Power point - To be permanently powered
- D1** Main Copper line Isolation Valve - Almost closed during normal operation, Fully open when servicing Probe or Injection lance. IMPORTANT. Always open the main line valve before closing bypass line valves D2. Always close the main line valve after opening bypass line valves D2.
- D2** Copper Bypass line Isolation Valves – Both Fully Open during normal operation, Both Fully Closed when servicing Probe or injection lance
- D3** Sample points to be able to take water samples before & after injection to measure the Free Chlorine level in ppm via an independent test. The size of this port is not important but should face downwards in order to fill a measuring cup.
- E1** Flow switch wired to ORP controller to stop dosing when flow stops.
- F1** Water meter with pulse output wired to ORP controller. As flow rate drops, the chlorine dosing rate slows proportionally.
- F2** Static Mixer to ensure Chlorine is properly mixed with the water prior to the ORP probe measuring the ORP mV.

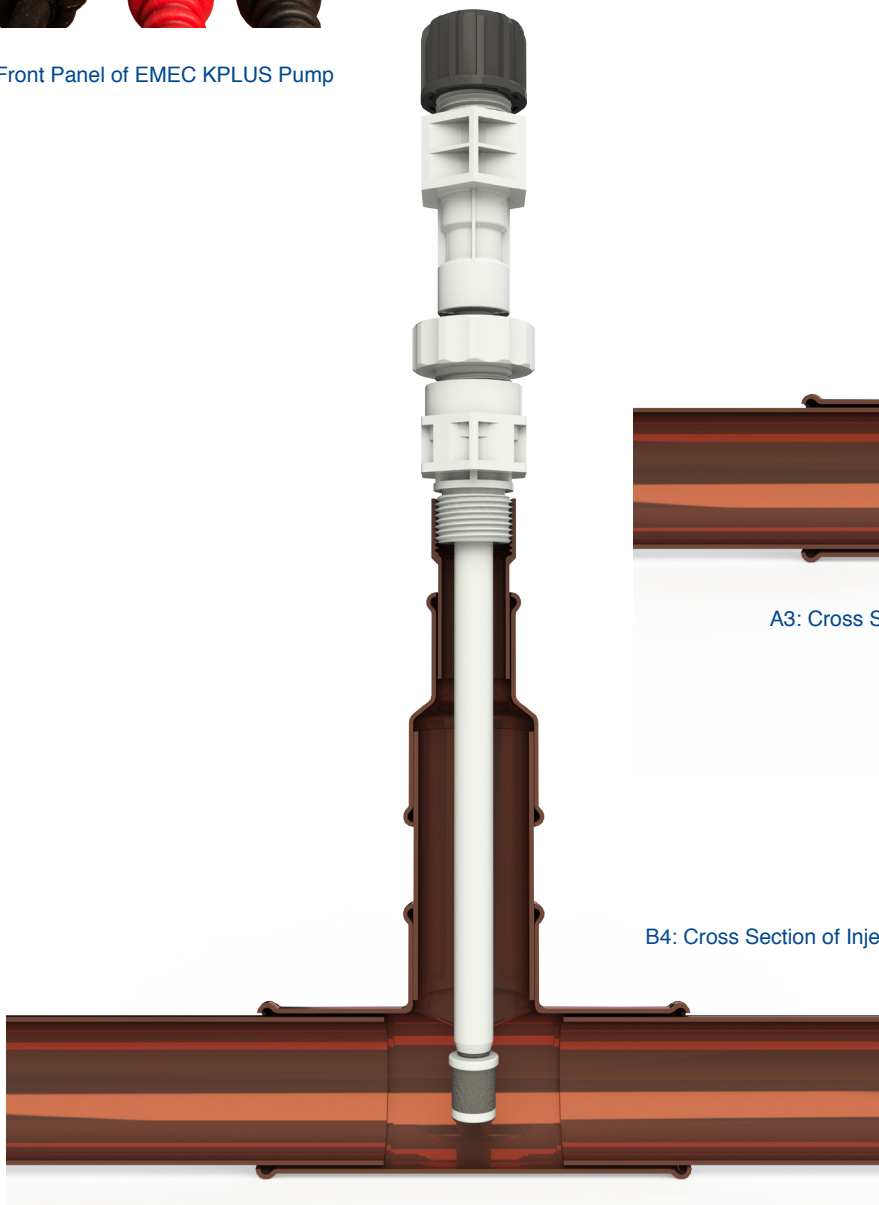


B1: Front Panel of EMEC KPLUS Pump

- Pump mode set should be "MULTIPLY 1-10".
- Small dial should be set to FULLY ANTICLOCKWISE (i.e. grey "1" setting).
- Large Stroke Length Adjustment will be set by the water treatment technician when commissioning, but best to have on 100% to prime the pump.
- To prime the pump, press the ON/OFF button so that the LED flashes and does not stay on solid. Release the button when the LED flashes. Then hold for 5 seconds and the pump will prime for 30 seconds. When done, press the ON/OFF button again in order to put the pump back into "Pulse Input" mode. The LED should be on Solid again until the controller starts pulsing the pump.



A3: Cross Section of ORP Probe in Manifold



B4: Cross Section of Injection Lance in Static Mixer