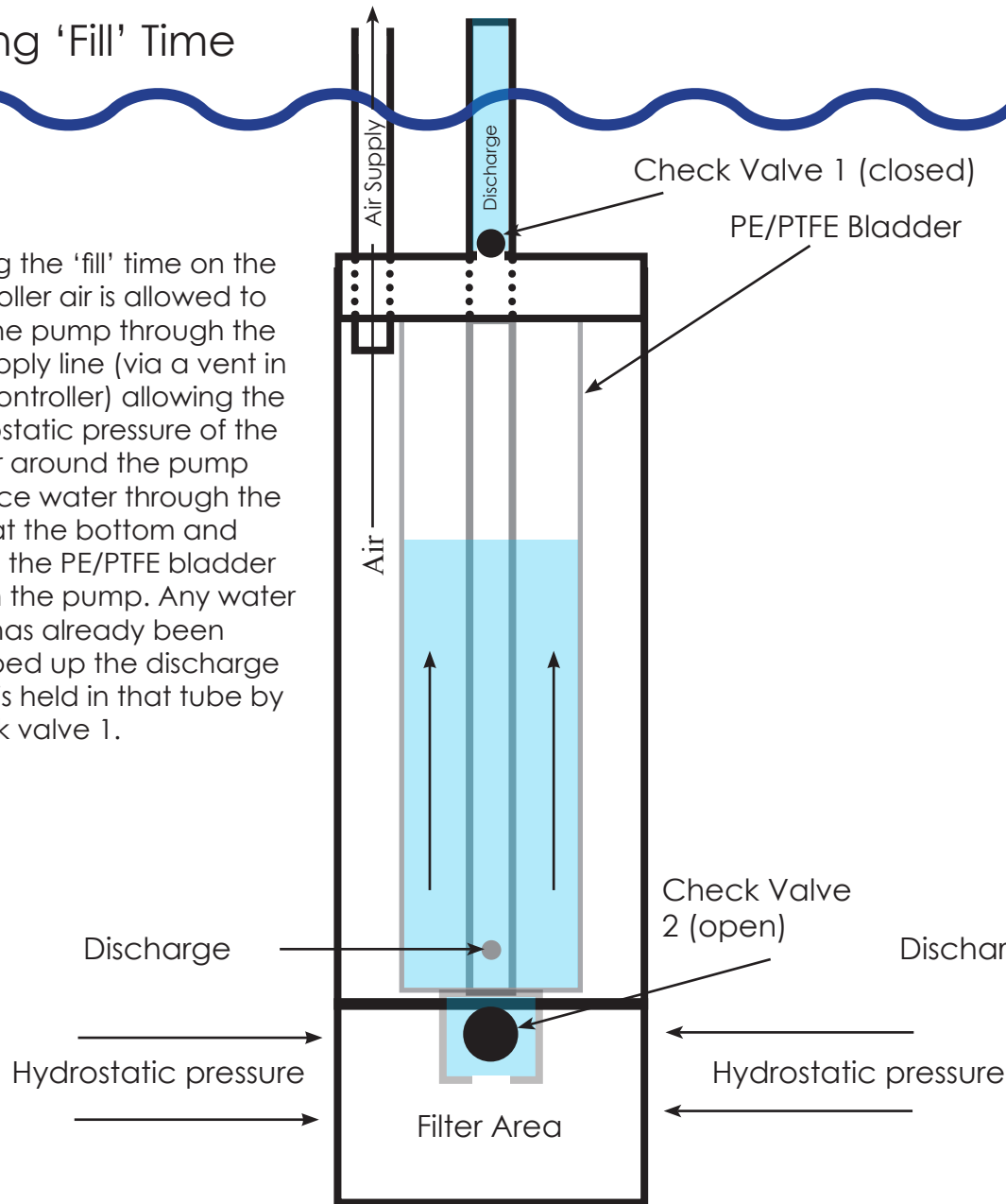


During 'Fill' Time

During the 'fill' time on the controller air is allowed to exit the pump through the air supply line (via a vent in the controller) allowing the hydrostatic pressure of the water around the pump to force water through the filter at the bottom and inside the PE/PTFE bladder within the pump. Any water that has already been pumped up the discharge tube is held in that tube by check valve 1.



During 'Discharge' Time

During the 'Discharge' time on the controller air is delivered to the pump through the air supply tube. This air squeezes the bladder closing check valve 2 and forcing the contents of the bladder through the discharge hole and up the tube in the centre of the pump up to the discharge tube (through the now open check valve 1). The air outside the bladder never comes in contact with the sample discharged.

