

and to said at least one container of cleaning liquid, and a water output line coupled to the plurality of manifold outlets;

a reversible pump coupled to the water output line for pumping and drawing sample water through the intake line into selected sample receivers and for pumping and pushing cleaning liquid from said at least one cleaning liquid container out the sample water intake line;

and a programmable controller coupled to the valve means and pump, said controller being programmable to cause pumping and drawing of sample water into the intake line and into respective sample receivers in series in a timed sequence of sample collecting events, said controller also being programmable for reversing the pump and pumping and pushing cleaning liquid from at least one cleaning liquid container out the intake line to wash away biofouling material between the sample collecting events.

2. The water sampling system of claim 1 wherein the water sample receivers each comprise an elongate container having a sample water opening at one end, a pumping water opening at the other end, and containing a slidable sealing piston slidable between the ends of the elongate container in response to differential pressure across the piston, each elongate container being coupled to a respective port of the multiport valve at the sample water opening end and to a respective manifold outlet of the output manifold at the pumping water opening end.

3. The water sampling system of claim 2 wherein said at least one cleaning liquid container comprises an elongate container having a cleaning liquid opening at one end, a pumping water opening at the other end, and containing a slidable sealing piston slidable between the ends of the elongate container in response to differential pressure across the piston, said elongate container being coupled to a respective port of the multiport valve at the cleaning liquid opening end and to a respective manifold outlet of the output manifold at the pumping water opening end.

4. The water sampling system of claim 3 wherein the initial position of the piston in respective sample receivers before a respective sample collecting event is adjacent to the sample water opening end of the elongate container, and the elongate container is back filled from the pumping water opening end with pumping water, and wherein the starting position of the piston in said at least one cleaning fluid container is adjacent to the pumping water opening end with the elongate container filled with cleaning liquid.

5. The water sampling system of claim 2 wherein the sample receivers are syringes.

6. The water sampling system of claim 2 wherein the sample receivers are sample collecting elongate cylindrical tubes.

7. The water sampling system of claim 2 wherein the sample receivers comprise a flexible bag inside the elongate container, said flexible bag having an opening coupled to the respective port through the sample water opening end of the elongate container.

8. The water sampling system of claim 1 wherein the valve means comprises a valve head having multiple ports and port inlets arranged in substantially circular configuration, and a distributor rotor bearing against the valve head for rotation to different rotational positions, said rotor forming a seal between the rotor and

valve head, said distributor rotor being formed with a coupling channel for coupling the sample water intake line to different port inlets and respective ports according to the rotational position of the rotor.

9. The water sampling system of claim 8 wherein the valve head and distributor rotor are formed with flat bearing faces for sealing and closing all port inlets and ports when the rotor is in rotational positions with the coupling channel between ports;

wherein the bearing face of the valve head is formed with a circular channel having a first diameter coupled to the water sample intake line;

wherein the bearing face of the valve head is also formed with a circle of holes being the port inlets, said port inlet holes being arranged in a circular ring having a second diameter different from the first diameter of the circular channel but concentric with the circular channel;

and wherein the bearing face of the rotor is formed with a radial coupling channel extending between the circular channel and circular ring of port inlet holes.

10. The water sampling system of claim 3 comprising: a cleaning liquid container comprising an elongate container of cleaning liquid coupled to a cleaning port of the multiport valve for washing away biofouling material from the sample water intake line; an elongate container of flushing liquid coupled to a flushing port of the multiport valve for flushing away cleaning liquid;

and wherein the controller is also programmable for operating the pump in reverse for first pumping and pushing cleaning liquid out the sample water intake line and then pumping and pushing flushing liquid out the sample water intake line for flushing away cleaning liquid.

11. An automated water sampling system for collecting multiple samples of sample water at a remote site comprising:

a multiport valve having a plurality of ports and respective port inlets, a sample water intake line coupled to the respective port inlets, and valve means for individually opening and closing the port inlets;

a plurality of sample receivers coupled to respective ports of the multiport valve;

the water sample receivers each comprising an elongate container having a sample water opening at one end, a pumping water opening at the other end, and containing a slidable sealing piston slidable between the ends of the elongate container in response to differential pressure across the piston, each elongate container being coupled to a respective port of the multiport valve at the sample water opening end and to a respective manifold outlet of the output manifold at the pumping water opening end;

the initial position of the piston in respective sample receivers before a respective sample collecting event being adjacent to the sample water opening end of the elongate container, and the elongate container being back filled from the pumping water opening end with pumping water;

at least one container of cleaning liquid coupled to a port of the multiport valve, said cleaning liquid container comprising an elongate container having a cleaning liquid opening at one end, a pumping water opening at the other end, and containing a