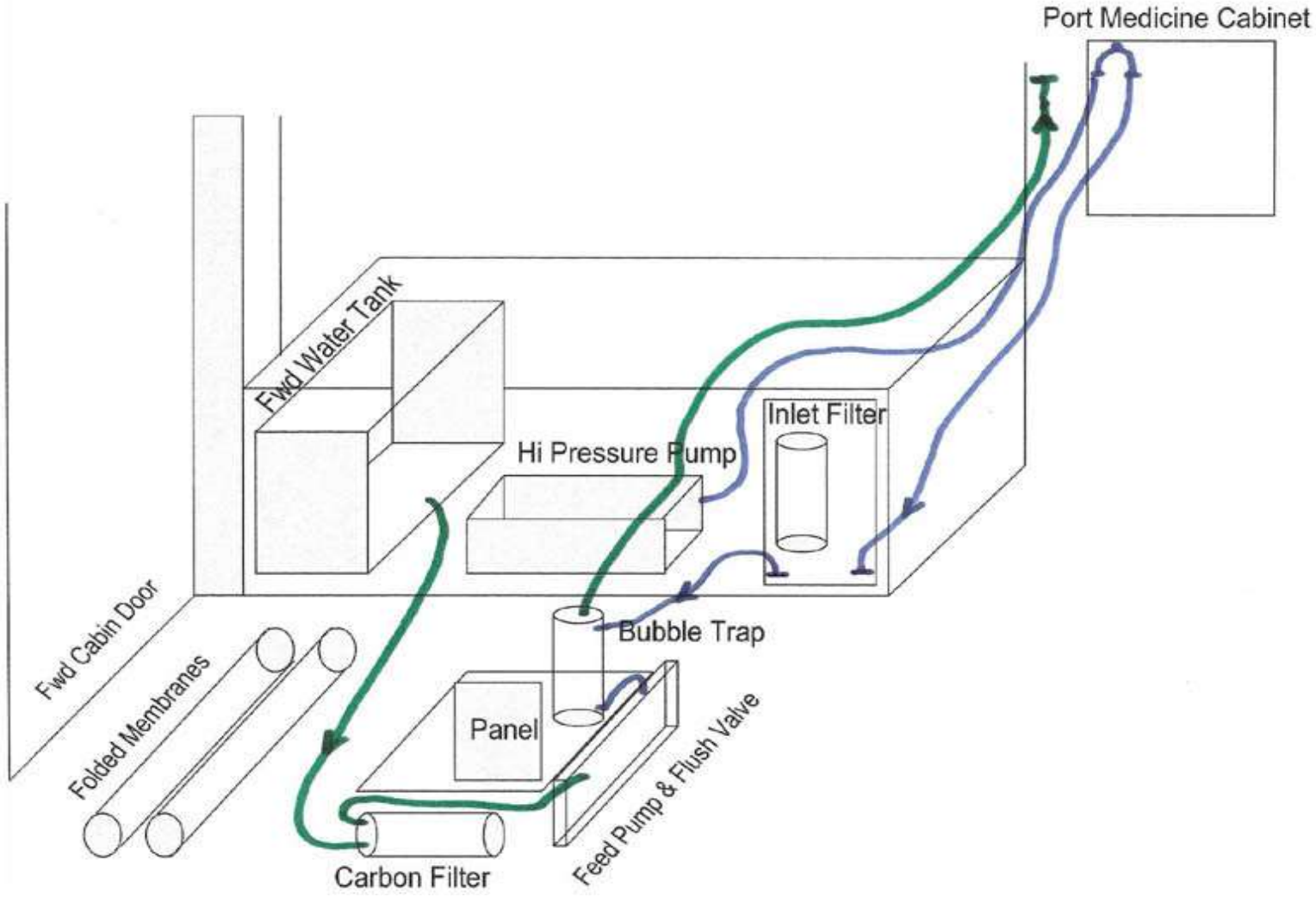
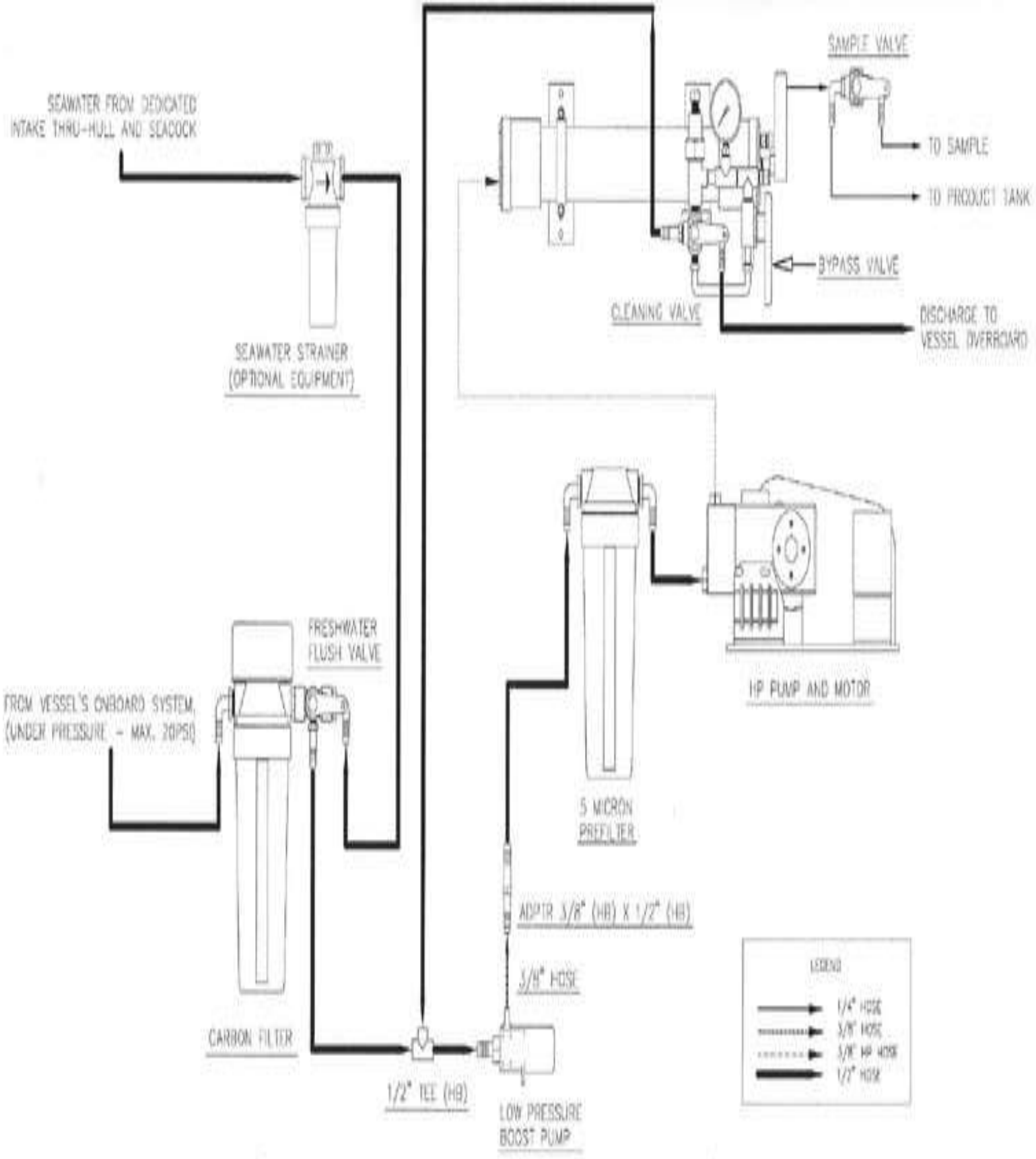
A watermaker was part of the cruising additions to *Dolfino*, 704 3-cabin. I looked at the small PuR systems but after some research decided on the Village Marine Little Wonder. It has a good reputation and the output per dollar and amp-hour seemed reasonable. Plus I was able to visit the factory located in nearby Gardena to see the unit and get installation advice. The VM salesman was very helpful and made several useful suggestions. I settled on the 12V 200GPD modular unit with a folded membrane. I wanted it installed in "unused" space to not sacrifice any easily accessible storage which as we all know is limited on the 42. After considering the engine compartment, aft head, lazarettes and under cabin sole, I got a suggestion from another owner to look at the forward bilge. After some careful measurements, it worked out fine.



Per the diagram, the membrane fits comfortably under the sole by the forward cabin door. It just slid through the small sole access panel for the knot/depth sensors. (I've since learned that not all 42s have this panel.) The hi pressure pump went under the drawers in the bunk pedestal-actually a lot of room there. After removing the belt guard it just barely slid thru the access hole so I didn't have to remove the drawer cross brace. VM offered a very nice integrated control panel that includes the valves, pressure regulator and flow meters and although it would have been nice to mount it externally somewhere I decided to put it in the bilge, accessible thru the sole access panel. The inlet strainer, lo-pressure feed pump and flush valve are mounted nearby on the forward stringer and the carbon filter for fresh water flushing is installed horizontally in the same area. Finally the inlet filter and sample valve and hose sit behind the access door to the forward thru-hulls.



VILLAGE MARINE TEC.

The plumbing was a bit more complicated. Actual hookup shown here. I converted the forward thru hulls to doubles and added another thru hull under the galley sink for the WM inlet and A/C discharge. But after a trial sail, the under galley spot was too shallow when heeled so I re-routed all the hoses to take the WM inlet from the thru hull for the forward head. This worked fine except for occasional air bubbles that got sucked in when the bow bounced. VM strongly recommended a dedicated inlet and after a few problems with hydrogen sulfide from stagnant sea water I agreed so the head got moved to the other thru hull that was now shared by the head and A/C inlets, and shower sump and WM discharges! Note that contrary to conventional wisdom, I put the WM and A/C discharges below water to avoid that annoying constant splashing sound we've all experienced in an otherwise quiet anchorage. VM did not like this. Finally I added a bubble trap that's basically a small reservoir with an air outlet to keep bubbles from damaging the pump and membrane. This all worked well and the only problem with the shared thru hulls was that I could not run the A/C and WM at the same time since air is sucked into the A/C pump from the siphon breaker on the WM discharge. Since the WM inlet and head outlet are very close, I do not use the forward head when the WM is running.

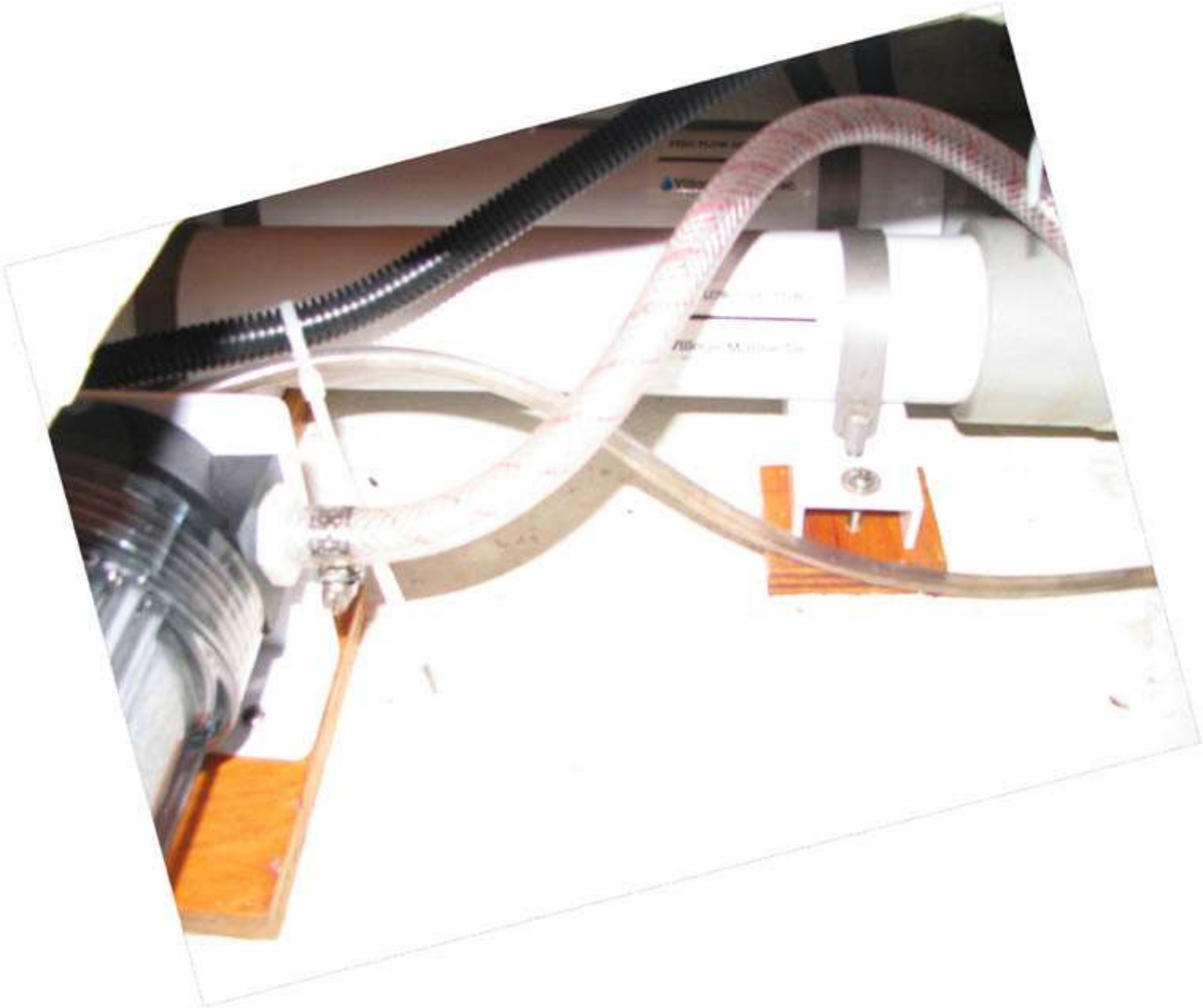
Product water can be sampled from a valve and ¼" hose near the inlet filter. Initial product is dumped overboard thru the forward vanity sink drain. When all OK, it goes into the 50 gallon forward tank thru a hose barb tapped into the plastic inlet fitting. It takes 6-8 hours to fill the tank. Product water is gravity fed down to the carbon filter and used to flush the system. The deck fill is sealed so only product water goes into the forward tank, but it is still fillable in an emergency.

The pumps are powered from the forward battery but the ground return goes back to the panel so the current is registered on the battery monitor. It draws 10-15A depending on temperature and salinity. Operation is fairly complicated, unlike the fully automated systems. First check 3 valves for proper position then turn unit on for ½ hour low pressure flush. This cleans out stagnant sea water and prevents hydrogen sulfide. Then the sample hose is stretched out to the vanity sink and pressure valve turned to hi to start making water. Initial product is salty so it goes down the drain for about 15 minutes. I take a small sample to taste and if OK turn the valve to route product to the tank. You want to check sea and product flow and pressure on the panel. After several hours, divert product to the sink again and turn back to low pressure. Finally if WM is not being used for a week or so, turn flush valve and lo pressure flush with product water for 1 minute or until bubble trap empties.

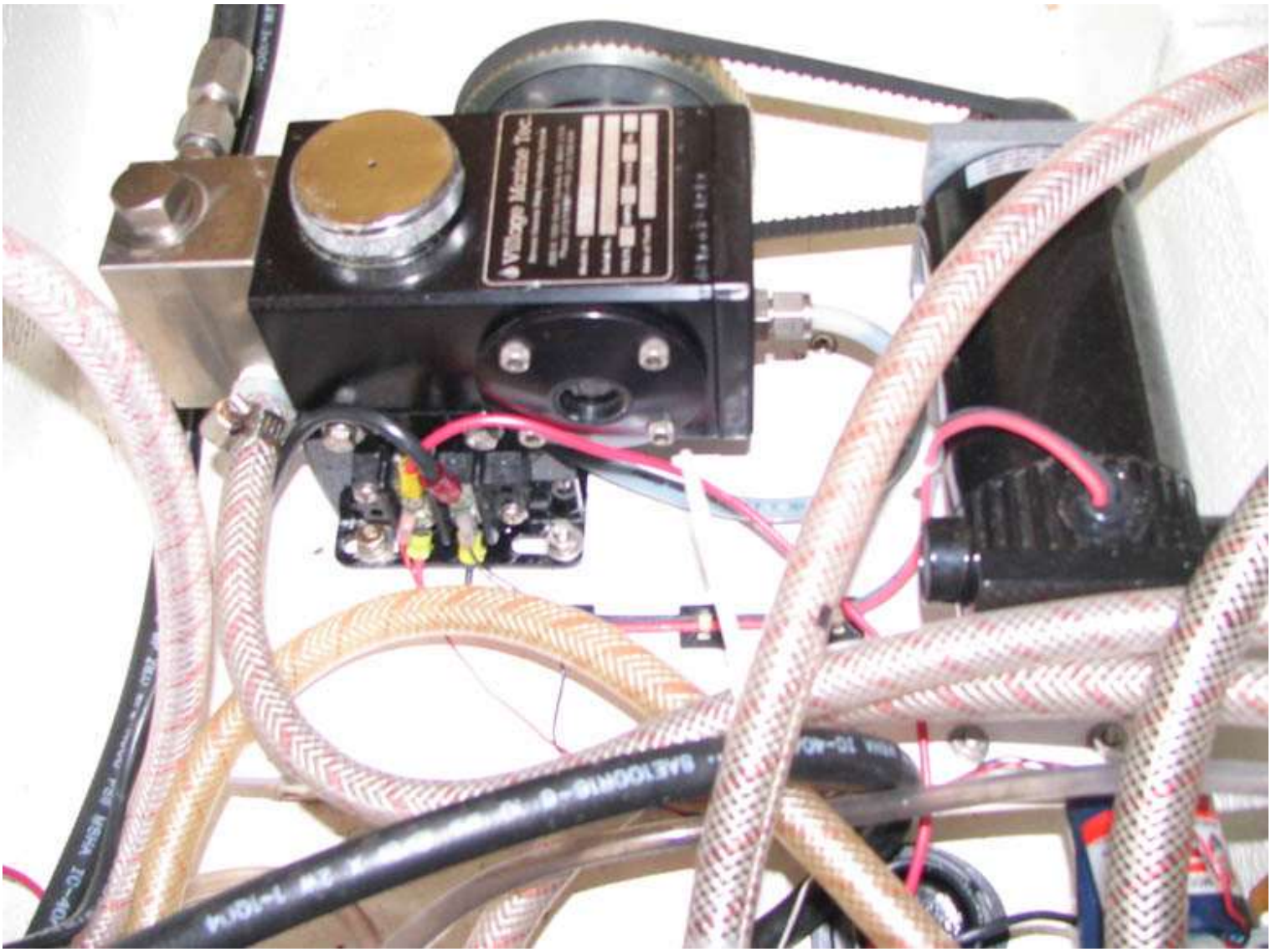
Because I had to move the WM inlet and add the bubble trap, the hose routing is very convoluted and messy as can be seen from the pictures. It's embarrassing to see how messy it looks! Fortunately, none of this is visible. Some day I'll redo it and clean things up. But I needed it ASAP for Mexico and it has made over 1000 gallons in 10 months, supplying all water needs except for boat washing. (If I had a deck hose, would have done that also.) I have not serviced the unit at all except to rinse the inlet filter in clean sea water. The VM manual has very thorough info on how to service and rebuild the unit.

Overall view with under-bunk drawers removed.

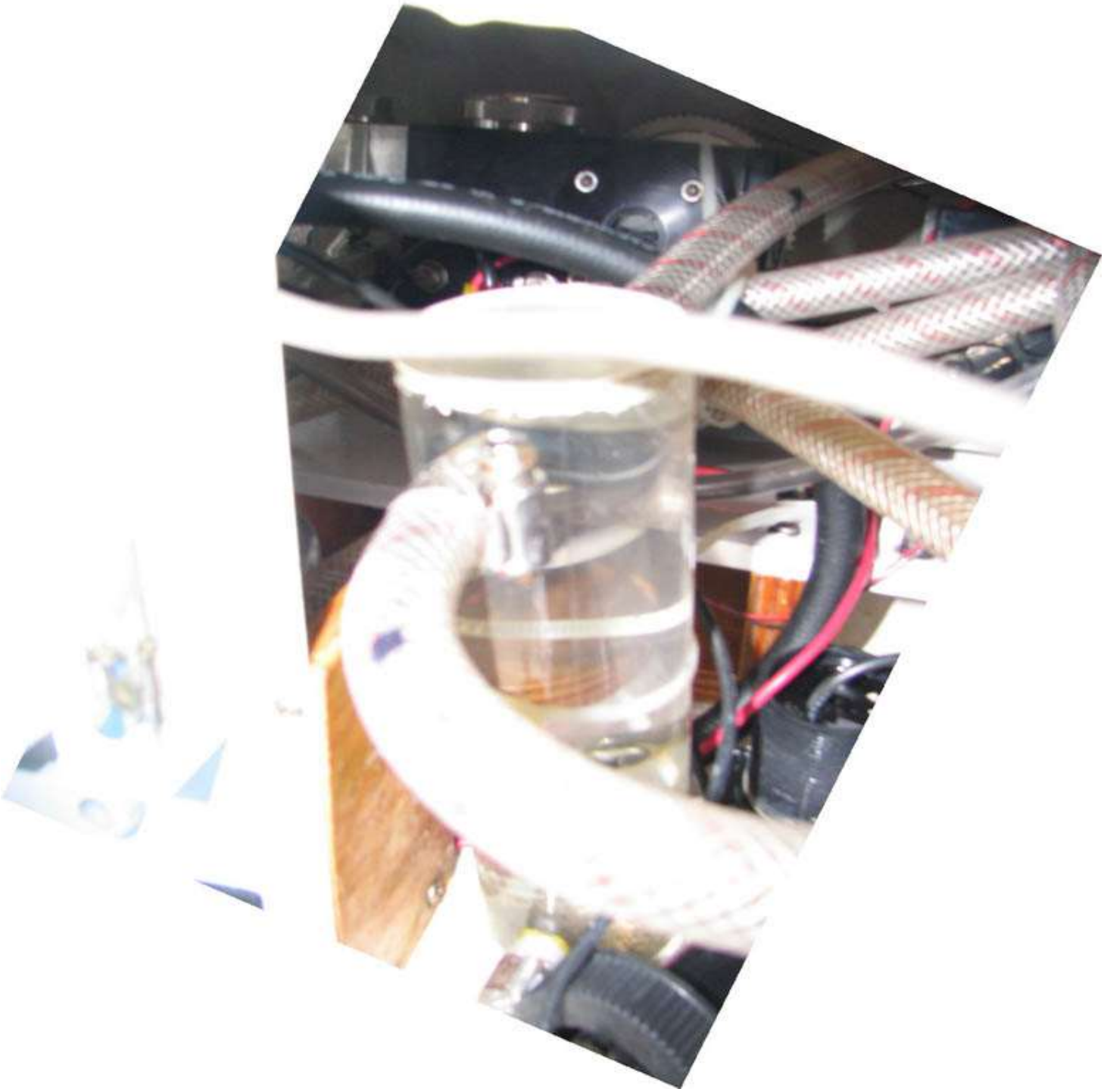
Valve panel installed in bilge.



Folded membranes and carbon filter in bilge.



Detail of hi-pressure pump. Hose city!



Bubble trap. Sea water comes in at top and out the bottom. Air is vented way up inside port medicine cabinet.

Inlet filter and thru-hulls. Sample hose is tucked up behind filter and stretched out to forward vanity sink.