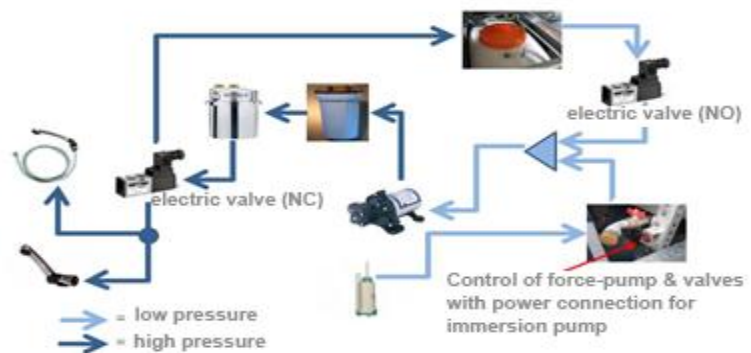


## Backwashing / water-filling



A tap with clear, fresh water around the corner is a real blessing on longer trips. For this reason, I use official camping grounds once in a while as I can fill-up my water tank easily as a nice side effect. Unfortunately, this is not always possible. Often I had to refill my water tank in the open air. Creeks and rivers with (at least) optical clean water qualify. But this is certainly no guarantee. Apart from that, refilling is often coupled with some troubles. A waterskin renders good assistance but is still not ideal (unhandy, heavy to carry, sediments might find their way into it). So I gave some thoughts to a better system and arrived at a cost-efficient solution that makes use of my already present installations. The only major expenditures were two electrical water valves for 12V. As they were special constructions for me (in general only 24V valves available, costs were in the range of total CHF 270 (ca. USD 270) including fittings. SMC Pneumatics (<http://www.smc.ch>) was the manufacturer. I also bought an additional immersion pump (USD 50) to increase pressure. The rest was a matter connecting the things together as you can see from the circuit diagram.

### Circuit diagram



The immersion pump I use mainly to overcome level differences between the water body and my storage reservoir (the Shurflow pump manages on 2 meters of difference). It would also be possible to add a pressure reduction valve so that water can be taken directly from a water tap on a camping ground. An additional feature could also be a boiler to have warm water all the times. But so far I couldn't find enough space for this gadget.