Did you know that you can have city like water pressure on your own private water well? Constant Pressure Water Systems is relatively new to the water well industry but is a great option for those who are wanting to run their private water well to provide water to their entire household, sprinkler systems, shops, swimming pools, etc.

A Constant Pressure System is ran by a variable frequency drive (VFD), which allows the motor speed to change as flow demand changes. The pump controller converts single phase 230 volt power to three phase 230 volt power. By converting the power, the VFD is able to control the speed of the pump allowing the pump to turn at the speed necessary to provide constant pressure. Also by converting single phase power to three phase power it costs a third less to run the Constant Pressure pump versus the Standard Pressure pumps.

A typical submersible Constant Pressure pump pushes water up through the drop pipe to the surface. Check valves are installed every 200’ to keep water from flowing back into the well. When the pressure in the system drops by 5PSI, a pressure sensor tells the pump controller to turn the pump on. Then, as described above, the controller varies the speed of the pump to maintain the pressure within 2PSI of your desired setting (under most conditions). The pressure is stored in a small pressure tank—typically 20 gallons (compared to the larger 90 gallon tank for Standard Pressure systems).

The pump controller is programmed to recognize a variety of conditions that might damage the pump and temporarily shut off the pump if those situations arise. Should the pump controller fail to monitor the pressure and the system builds up too much pressure, the pressure relief valve will release the excess pressure to keep from damaging the submersible pump & drop pipe.

Another advantage to the Constant Pressure System is that as long as there is at least 1GPM water demand, your pump stays on. This eliminates the hard start/stop issue that the Standard Pressure Systems have, and can extend the lifespan of your pump. The Constant Pressure System also turns on very gradually when it does turn off or on. This too can lengthen the life of your pump.

The Constant Pressure System is great for those homeowners to what the assurance of full pressure throughout their entire household, no matter how many faucets, hose bibs, or sprinklers are running at the same time. This system also has a much smaller footprint in your yard and everything (including the well head) is easily hidden with a landscape rock or camouflaged in with your surrounding landscape.