Benefits of the Cycle Reducing Valve

A cycle reducing valve is basically a pressure regulated valve that "restricts" the amount of flow across the valve when it reaches a specified "restriction pressure" (usually 2-10 psi less than the "shut-off" pressure). By reducing the water flow once the pump has reached a certain pressure, we can achieve run times long enough to dissipate the electric motor's "initial starting" heat without having to increase the size of the storage tank. A single phase capacitor start submersible pump motor needs 1 to 3 minutes of runtime in order to expel the initial heat generated by starting. Therefore, one can use a small tank with a large pump and still get the run time needed for the electric motor to cool itself.

When the cycle reducing valve reaches the "restriction pressure", high pressures are reached between the pump and the cycle reducing valve. Schedule 80 threaded PVC pipe and Schedule 120 threaded PVC couplings are rated to handle far greater pressures than the submersible pump will produce. However, we have found that when using a hydro pneumatic tank and automatic air system, the pressures are great enough to pop the rubber bleeder out of the galvanized drain Tee. Therefore, we use a ¾" brass bleeder instead of a 1" rubber bleeder. These increased pressures do not harm or decrease the life of the submersible pump or motor.

When the cycle reducing valve reaches the "restriction pressure", the motor actually uses less power. An alternating-current electric motor will only use as much power as is required. Therefore, when the pumping pressure is above the efficiency curve, the amperage is less. This results in less power consumption and more savings.

Cycle Reducing Valve = Smaller Tank + Longer Motor Life + Less $

CHECK OUT THE CYCLE STOP VALVE LINK IF YOU WANT TO LEARN MORE.