Standard Pressure Water Well Systems

The basic (Standard Pressure) residential water well system is a system that has been tried and true over many generations. The submersible pump pushes water up through the drop pipe to the surface. There is a check valve installed every 200' that keeps the water from flowing back into the well. The pressure switch turns the pump on & off when the pressure drops & when the pressure builds up again. This typically happens over a 20PSI range. The pressure is then stored in an above ground pressure tank. If the system builds up too much pressure, the pressure relief valve will release the excess pressure to prevent the submersible pump or PVC drop pipe from being damaged. Below is a basic diagram of this set up.

This is a system that can be installed on almost any water well, it has been tested for many years and works great. However, that doesn't mean that the system doesn't have its drawbacks. One of the main flaws to a Standard Pressure System is that the submersible pump turns on and off as the pressure in the pressure tank rises and falls every 20PSI. During high water usage times, such as showers or lawn irrigation, this results in a high number of pump starts and stops. These hard starts/stops is what shortens the lifespan of your downhole pump. Submersible pumps are rated for 20,000 starts and stops, the more we can minimize the pump kicking on and off the greater the lifespan of your pump. This can be problematic for those customer's who are looking to use their water well for lawn irrigation. Because most sprinkler systems require a solid 60PSI to efficiently water the yard, the 20PSI pressure range can be frustrating or problematic since the sprinklers will throw farther/shorter as the pressure rises/falls. This could result in dry/brown spots in your lawn. A solution for these problems can be a Constant Pressure System that operates off of a variable speed drive.


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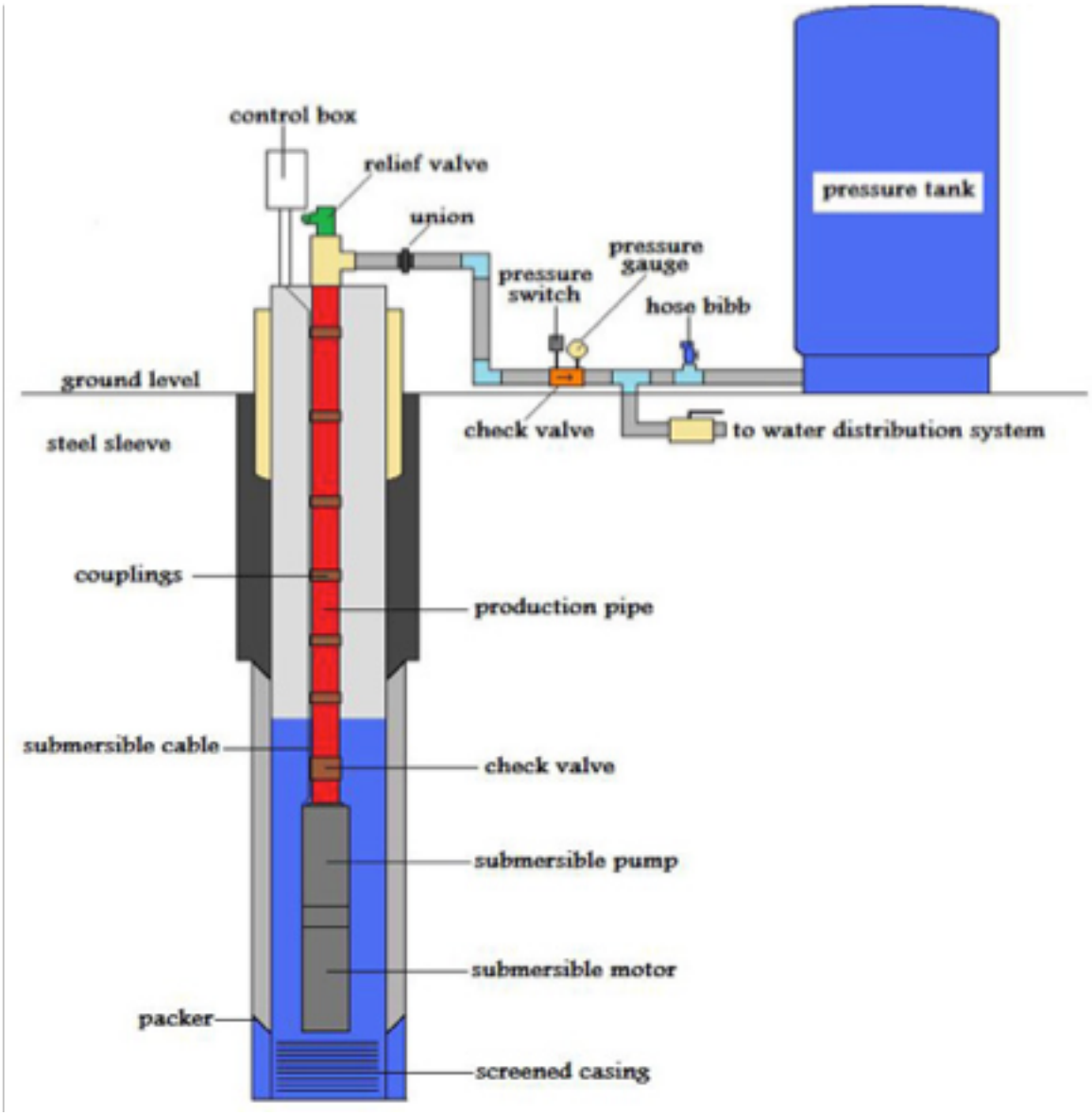
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check valve
submersible pump
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