

# Potable Water Pressurization Sets



**Potable water pressurization set** for a chemical plant in Nigeria. This pump and tank set was built to oil field specifications. A unique feature of this skid is the large (1500 gallon) bladder tank. The bladder was custom fabricated.

The potable water pressurization set typically consists of one or more pumps and a hydro-pneumatic pressurized water storage tank, plus the associated piping and controls. The size and capacity of the equipment is dependent on the volume and pressure demands of the application. Fresh water is pumped from a gravity storage tank or other low-pressure source to the user and the storage tank. The pump(s) are controlled by pressure switches to maintain preset pressure limits. The storage tank contains both water and air (usually separated by an elastic membrane or "bladder"). This allows the non-compressible water to compress the entrapped air, in effect, storing a volume of water under pressure. Thus, some water usage is possible before the pump is started to replenish the supply. This allows the

pump to operate on an intermittent basis, except under high usage periods.

Normally at least two pressure pumps are used. These may be either horizontal or vertical arrangements. In this instance, one pump would be in service, and the other held in stand-by mode. The two pumps are switched either manually or automatically to equalize the service time for each pump. Additionally, if occasional high demand is expected, the second pump can be set up to turn on at some low-pressure set point. For even higher demand and reliability applications, a third pump can be added to the system. This pump is held in reserve to be switched on during maintenance of the service pumps.

To compliment the pressure storage abilities, additional water treatment equipment can be added to the package. This equipment can include sediment filters to remove particles from the water and carbon filters for taste and odor removal. Chlorination packages or other chemical injection units can be added to treat a variety of potability or corrosion problems.

**Let Water King design and fabricate your next Potable Water Pressurization Set.**

