



Triple R Specialty

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hy·dro·stat·ic [hìdrə státtik]

Definition:

- 1. of fluids at rest:** relating to, involving, or typical of fluids that are at rest and the forces and pressures they exert
- 2. of hydrostatics:** relating to, involving, or typical of hydrostatics

Hydrostatic Testing of piping is basically, testing the pipe that has been installed by using a mechanical means to increase the pressure, so you can be sure there are no leaks or any other problem that would cause failure.

Most authorities having jurisdiction require that piping be pressurized to a specific pressure that is higher than the normal operating pressure. As an example if normal operating pressure (city water pressure), is 80 psi you might be required to test the new pipe at 200 psi for a certain length of time to insure that it was installed properly. Water is used rather than air or some other gas because water does not compress. If there were to be a catastrophic failure of the pipe, while using water, it would simply mean water on the floor, using a gas (air), there could be a rather dangerous explosion.

The best way to pressurize installed piping is to use a pump that is powered by a gas engine or electric motor, to force water and pressure into the pipe. These are called Hydrostatic Test Pumps. To begin the test be sure that all lines are filled with water. Any air would have to be compressed before you begin to see any pressure increase causing your job to take much longer than it should. Remove the air by opening the inspector's test valve or other valve on the end opposite the water input and allow the air to escape. Connect the test hose to the system and then to the test pump. Be sure to turn on the water to the pump then turn the pump on and watch the gauge, when desired pressure is reached turn the pump off and disconnect the hose from the pump.

Things you should look for in a Quality Hydrostatic Test Pump.

Pumps: Most all test pumps use piston or plunger type of pumps. They are designed to be used on a pressurized water supply, like a hose bib. This type of pump is not designed to "suck" or draw water from a reservoir. It can be done but it has to be done in the right way. In order to use a piston pump with non pressurized water supply, it must have a positive flow to the pump. Your reservoir should be higher than the pump (pump on the ground and reservoir in the bed of truck) and you need to have a gravity feed started before connecting to the pump. In most cases as long as there is a positive flow of water to the pump it should work. For most jobs a pump with 3.5 gallons per minute is ideal, anything less increases your testing time costing you money.

Power: Gas, 120 volt electric or 12 volt power supply, allowing them to be connected to a vehicle battery.

Light weight: Test pumps that weigh more than 40 lbs are difficult to carry, modern test pumps are made of aluminum alloy or in some cases even high strength ABS, these materials are lighter and very resistant to corrosion. The best test pumps are not only light but usually mounted in a custom carrying case that will help keep hoses and electric cords under control. The cases will also protect the pump from getting easily damaged while being transported in your vehicle.

Bypass/Pressure Regulator: A small system can pressurize VERY quickly. So ideally the test pump should have a pressure regulator that is preset to ensure the system isn't over pressurized.

Gauge: The best test pumps also have a pressure gauge that is liquid filled to dampen the vibration of the needle. The gauge should be capable of being pressurized to two times the maximum pump pressure (if the pump is capable of 300 PSI the gauge should read at least a 600 PSI. The middle of the scale on the gauge is where it is the most accurate).

Hoses: Test pumps should also come equipped with all the hoses needed to connect to a system.

Since more and more states, counties and local governments are requiring sprinkler systems in residential construction and all other water pipes to be pressure tested, there will be a growing need for hydrostatic testing. So having the right pump to do the job will be important so you can keep up with the demand.

To insure quality look for pumps that are made in the USA.