

6000 PSI, HIGH FLOW, TOGGLE & AIR OPERATED VALVES MODELS 1091 & 1094

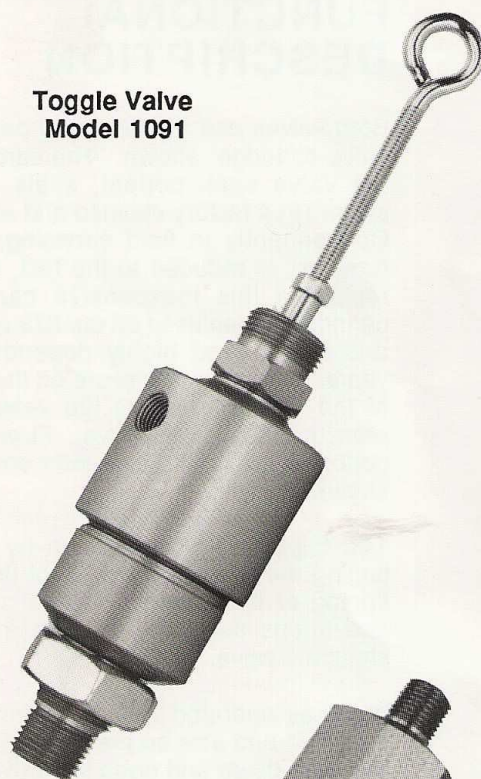
GENERAL INFORMATION

The 1091 and 1094 valves are an open or shut, two way valve for air, gas or liquid lines up to 6000 PSI. They are similar to our 816 series valves but handle much higher flow rates. In the toggle version, the valve is shut when the toggle lever is relaxed and the lever extends straight out. When the lever is tipped in any direction the valve opens. A variety of levers can be connected to the 1/4"-20 thread. In many cases the valve eliminates the need for snap action switches, solenoids, and other complicated devices to open or shut a high pressure line. One typical application is to open a cylinder charging line only when a protective door is shut. Here the door could push against the toggle to open the valve. A maximum of 30 inch pounds is required to actuate the valve at rated pressure. For example, a six inch lever would require five pounds to operate. A one inch thread section is provided on both ends permitting a variety of ways to mount the valve using a one inch jam nut.

The 1094 valve is similar to the 1091 valve except the toggle is replaced by a cylinder. Any 125 PSI pressure source (air, gas, or liquid) will operate the valve. Adding an inexpensive, low pressure solenoid valve converts the 1094 to a high pressure solenoid valve. Both valves have a one inch threaded section to permit mounting on a panel or plate. A jam nut is provided.

SPECIFICATIONS

- Maximum pressure, inlet ----- 6000 PSI
 differential ----- 6000 PSI
 outlet ----- 6000 PSI
- Ports, inlet ----- 1/4" MNPT
 outlet ----- 1/4" FNPT
- Flow coefficient (Cv) ----- 0.8 (0.23" orifice)
- Materials, body ----- anodized aluminum
 internals ----- brass & stainless
 seals ----- Viton(TM) & KEL-F
- Mod 1091 lever actuating force --- 30 inch lbs at 6000 PSI
- Mod 1094 actuating pressure --- 120 PSI with 6000 PSI
 at inlet and outlet
 65 PSI with 6000 PSI
 at inlet and 0 at outlet
- Maximum allowable actuating
 pressure ----- 5000 PSI
- Size, mod 1091 ----- 2.25" dia. x 6.1" long
 mod 1094 ----- 2.25" dia. x 6.5" long



Toggle Valve Model 1091



Air Operated Valve Model 1094

Aqua Environment Inc.

PO Box 935, Stinson Beach, CA. 94970, (415) 453 8157

TYPICAL APPLICATIONS

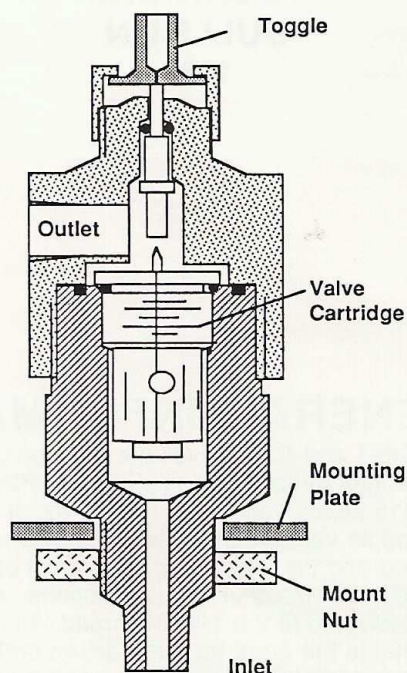
- Test panels where fast, accurate, hand control of pressure is desired
- Gas supply interlocks such as protective doors on charging stations
- Component testing
- Process industry control
- Charging stations where it is desirable to have the supply shut off if operator releases control
- Replacements for high pressure solenoid valves

FUNCTIONAL DESCRIPTION

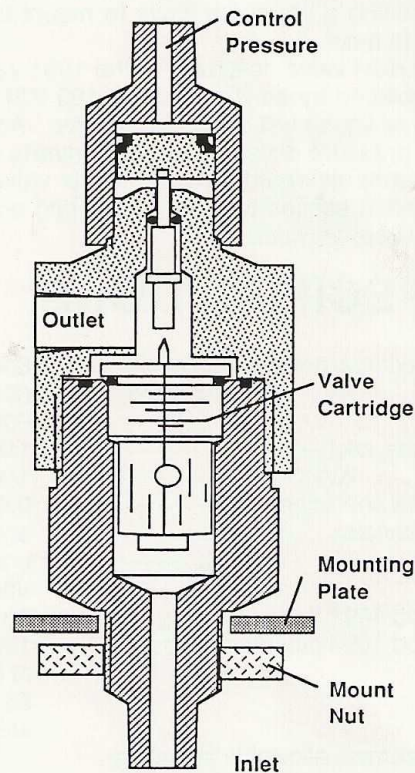
Both valves use the balanced poppet high flow valve cartridge shown. The cartridge contains the valve seat, poppet, seals, and filtration system in a factory cleaned and assembled unit. Consequently in field servicing, should it be required, is reduced to the fast, simple task of replacing this inexpensive cartridge. This cartridge is also used on our 873 regulator series and has proved highly dependable over the years. Downward pressure on the pin at the top of the cartridge opens the valve. Release of pressure closes the valve. Flow enters at the bottom of the valve and exits out the side port shown.

The toggle version is open by mechanically tipping the toggle at the top of the valve. This tipping or lever action pushes down the stem and opens the valve. Release of the toggle shuts the valve.

In the air operated version air enters the top of the valve and acts on the piston shown to move the stem down and open the valve. Release of air pressure allows the valve to close. Other gases or liquids may also be used to actuate the valve permitting use in a wide variety of applications.



**Model 1091
Toggle Valve**



**Model 1094
Air Operated Valve**

Aqua Environment Inc.