



SPECIFICATIONS – ACCESSORIES: INTAKE RELIEF VALVES

Pressure Control

The Waterous Intake Relief Valve system is designed to act as a safety valve by "dumping" excess pressure from the inlet side of the pump.



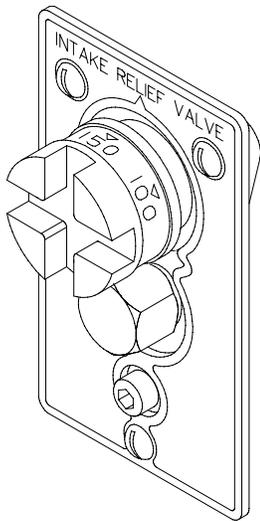
Description:

The Waterous Intake Relief Valve system makes it less likely that "water hammer" will burst the supply line, and allows the discharge relief valve or governor system to properly control discharge pressure.

The Waterous Intake Relief Valve system incorporates two separate units for ultimate flexibility in installation and operation: the pilot valve and the main valve. The pilot valve controls operation of the main valve and can be panel mounted to be easily field adjusted for varying operating conditions, or compartment mounted and preset for a specific pressure. It

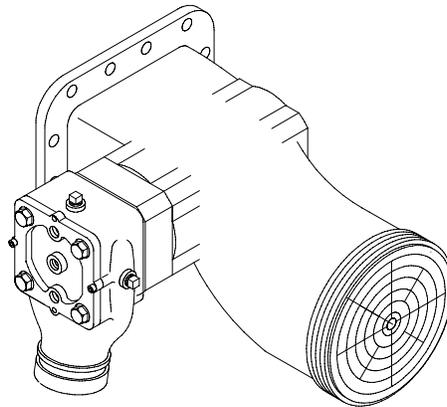
includes a removable strainer and removable needle valve for easy servicing.

The main valve is a sliding piston type valve mounted on the pump inlet, with its outlet terminating in a 2-1/2 inch Victaulic® connection which the apparatus builder can pipe to an appropriate location. Being pilot valve controlled, it can go from closed to full open with very small pressure rise in the pump inlet.



PILOT VALVE:

Mounted on the pump control panel.



RELIEF VALVE:

Mounted on pump suction fitting.



**RELIEF VALVE OUTLET
WARNING PLATE**

Industry-Leading Sales and Support

When you purchase Waterous equipment, not only do you get quality products, you get quality service. Our expert service technicians are the best in the business and they are always happy to answer any service questions you might have.

Sales/Applications Assistance
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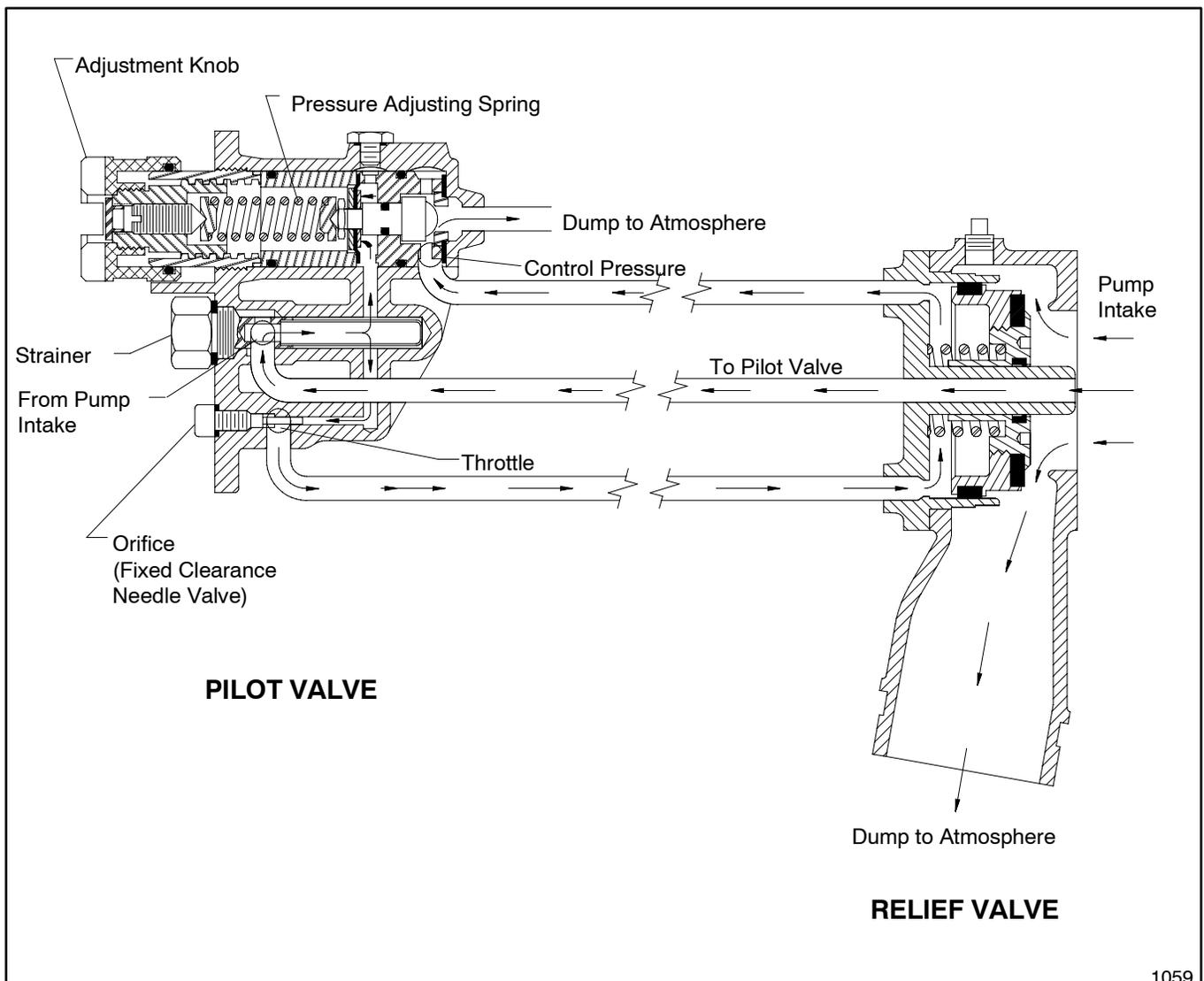
SPECIFICATIONS - ACCESSORIES: INTAKE RELIEF VALVE

Special Features

Among the features that make the Waterous intake relief valve system reliable and simple to use and maintain are:

- Corrosion resistant bronze and stainless steel used in all critical areas throughout the system.
- Easily serviced with strainer and needle valve readily accessible on panel.
- Smooth turning adjustment knob with ``cross-slot'' to accommodate a spanner wrench or similar flat tool.
- Calibrated from 50 psi to 250 psi.
- Remote mounted pilot valve for quick response and flexibility in installation.
- Relief valve installed and tested by pump manufacturer.

Schematic Showing Relief Valve Operation





SPECIFICATIONS – ACCESSORIES: DISCHARGE RELIEF VALVE

Pressure Control

The Waterous Discharge Relief Valve system provides sensitive pump control to protect firefighters from sudden pressure surges resulting from changes in discharge flows from the pump. Designed with a “built-in-memory”, this system has a wide continuous range of pressure control from a minimum of 75 to a maximum of 300 psig (5.2 to 20.7 bar) depending upon pump performance characteristics, and may be put in or taken out of operation without disturbing the pressure setting. This lets you leave the system at a pre-set “ready-to-use” pressure setting.



Description:

The Waterous discharge relief valve system incorporates two separate units, a panel mounted pilot valve which controls the operation of the relief valve proper, and the relief valve which is normally mounted on the pump.

The pilot valve has two controls, one to adjust the relief valve operating pressure, and the other, an ON-OFF control, to place the relief valve in or out of operation.

The ON-OFF control lets the operator put the relief valve out of operation (hydraulically holding the relief valve closed) when a pressure higher than set pressure or higher than 300 psig (20.7 bar) is desired. Turning this control ON permits the relief valve to operate again at whatever pressure was previously set without further adjustment.

The relief valve is mounted on the pump or in the piping between the intake and discharge sides of the pump. It modulates flow between discharge and intake by ranging between the fully open and fully closed position in response to hydraulic signals from the pilot valve. The relief valve is available in three sizes. A two-inch diameter relief valve is used on pumps with rated capacities of 750 GPM (2850 L/min.) or less. For pumps with rated capacities through 1250 GPM (4750 L/min.), a three-inch diameter relief valve is used. For pumps with rated capacities of 1250 GPM through 2000 GPM (4750 through 7800 L/min.), a four-inch relief valve is used.

Special Features:

Among the features that make the Waterous discharge relief valve system reliable and simple to use and maintain are:

- Corrosion resistant brass, bronze and stainless steel used in all critical areas throughout the system.
- An easily cleaned pilot valve strainer that can be removed from the panel and cleaned even while the pump is operating.
- A smooth-turning pressure control with exclusive needle thrust bearing for precise pressure control adjustment.

- No diaphragm to become strained or ruptured.
- An easily removeable orifice that permits quick and simple cleaning or replacement.
- Two indicator lights show the position of the relief valve; green for fully closed and amber for at least partially open.

Discharge Relief Valve Replacement Kit:

The discharge relief valve replacement kit is available for installation on almost any type of fire pump. Kits come complete with 2 inch, 2-1/2 inch or 3 inch NPT tapped flanges, gaskets and flange mounting hardware. You furnish the pipe and install between intake and discharge.



PILOT VALVE:

Mounted on the pump control panel. Hydraulically controls the operation of the relief valve.

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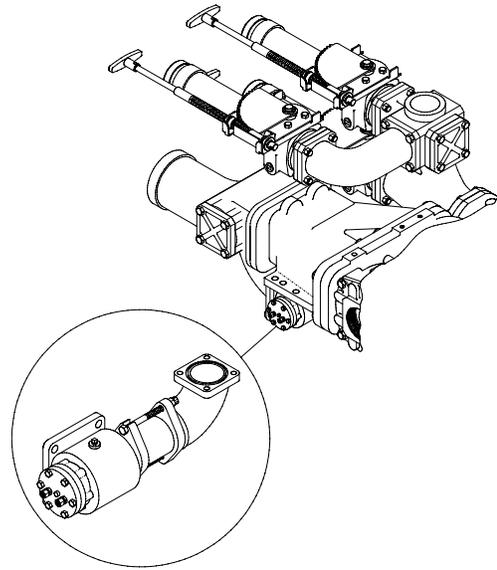
SPECIFICATIONS - ACCESSORIES: DISCHARGE RELIEF VALVE

Installation:

Select an opening on your pump intake and discharge, preferably at the two closest points to minimize friction loss, and install the relief valve. The pilot valve requires three lengths of 3/8 inch copper tubing which will extend from pump discharge to the pilot valve, from the pilot valve to relief valve, and from the pilot valve to pump intake.

3" Relief Valve:

For capacities through 1250 GPM (4750 L/min). Shown mounted between discharge and intake on a standard Waterous midship mounted pump.



Schematic Showing Relief Valve Operation

