

D-QRV PRESSURE RELEIF HYDRAULIC CONTROL VALVE

ANIFIVAL



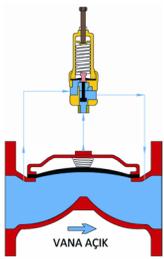
PRODUCT DESCRIPTION

High-speed pressure relief hydraulic control valves are safety control valves which protect the piping systems against excessive pressure fluctuation due to opening & closing of pumps used in irrigation networks and distribution lines, by discharging that pressure fluctuation to atmosphere.

PROPERTIES

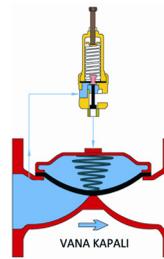
- 1- Protects piping system and other armatures through discharging excessive pressure which may occur within the valve network to atmosphere quickly.
- 2- Valve opens quickly, and then, after the discharge is completed, it is closed slowly and with a full-sealing, without causing any pressure fluctuation again in the line.
- 3- Operates hydraulically, completely with line pressure, without requiring an extra power supply.
- 4- Owing to its design with diaphragm actuator, its maintenance is considerably easy and cheap.
- 5- Operates safely, even in horizontal and vertical installations.

WORKING PRINCIPLE



VALVE OPEN

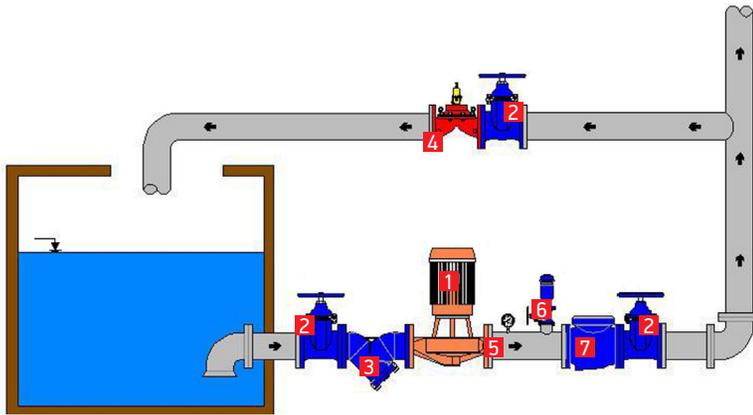
In case of a sudden pressure increase in the line, spring force in the 2 way relief pilot valve is overcome and discharge port of pilot valve opens. Pressurized water in the actuator of the main valve is discharged through the discharge port to atmosphere and thus, excessive pressure is discharged to atmosphere through opening of main valve body.



VALVE CLOSED

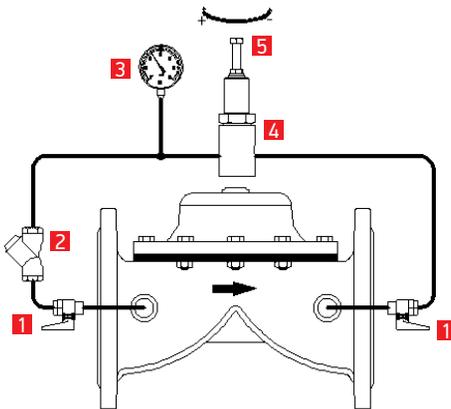
Once the pressure in the line reduces to its normal value, spring force in the pilot valve pushes the piston which is connected to diaphragm of pilot valve and closes the discharge port. Line pressure at the normal level enables the actuator of the main valve to be filled up with the pressurized water from the the inside of the pilot valve. Hence, pressurized water in the actuator pushes the diaphragm with the help of valve's spring force and switches the valve to closed position with a full-sealing.

SAMPLE MOUNTING AND APPLICATION SCHEME



- 1- Pump
- 2- Isolation Valve (Gate Valve, Butterfly Valve , etc.)
- 3-Hig -speed pressure Reilef Hydraulic Control Valve
- 4-Monometer
- 5-Air Discharge Valve (Vacuum Lifter)
- 7-Check Valve

APPLICATION SCHEME



- 1) Mini Ball Valve
- 2) Strainer
- 3) Manometer
- 4) Pressure Reducing Pilot Valve
- 5) Pilot Adjusting Bolt

Install the valve according to the flow direction arrow on it.

Mount the high-speed pressure relief control valve in such a way that it is in a "TE" configuration with respect to the system and its valve outlet is open to atmosphere.

In order the high-speed pressure relief control valve to be operated in full efficiency, a valve diameter which is equal to the diameter of the pipeline should not be chosen. In general, the diameter of the high-speed pressure relief control valve should be chosen as 1/3 of the diameter of the pipeline. For example, in case of a main pipeline diameter with DN 150, the diameter to be chosen for the valve should be DN 50.

For the sake of simplicity in case of service maintenance, it is recommended to mount isolation valves (gate, butterfly or ball etc. valves) to close the water in the inlet direction of the line.

To avoid frosting in the winter, discharge the water in the valve actuator into atmosphere.

The adjustment of the high-speed pressure relief hydraulic control valve is made by means of adjusting bolt of pilot valve on the valve. If the pilot adjusting bolt is turned clockwise, pressure increases. When turned counterclockwise, then, pressure decreases.

If the valve does not close itself at the adjusted pressure value, untighten the needle valve on the pilot valve with a 1/2 or 1 turn