

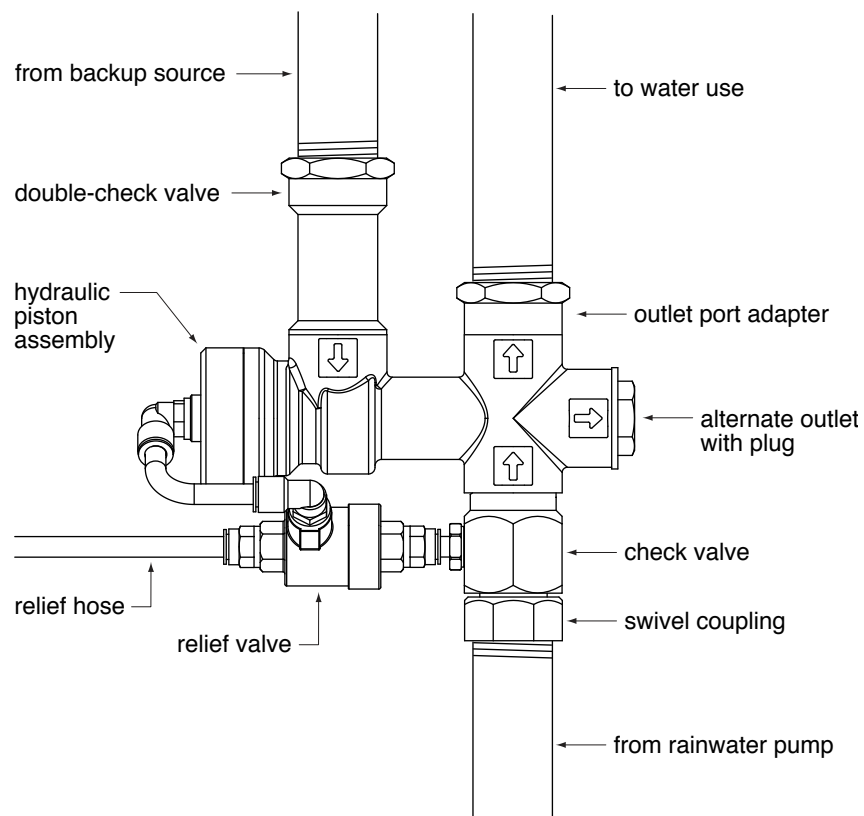
Hydraulic Backup Valve

When rainwater is not available, the Hydraulic Backup Valve automatically switches from a rainwater pump to a backup water source. It does not require electricity, is fully waterproof, is unaffected by sunlight, and can be mounted in any position. Quality construction features include heavy-duty chrome-plated solid brass body components, reliable internal seals, and precision machining. All ports are one-inch female threaded NPT.

The valve must be used with a rainwater pumping system that delivers continuous pressure, such as a pump controlled by an electronic pump controller or by a pressure tank with a pressure switch. The rainwater flows through the relief valve to the hydraulic piston assembly which multiplies the water pressure, causing the piston to slide horizontally to block the backup water supply. The rainwater also flows directly through the valve body to either outlet port.

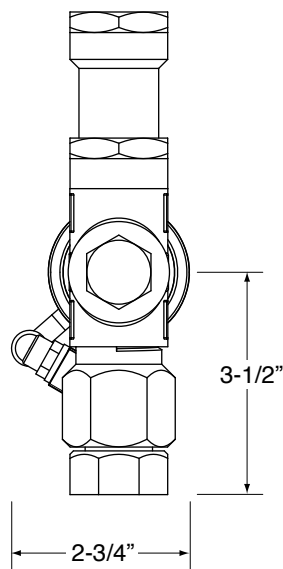
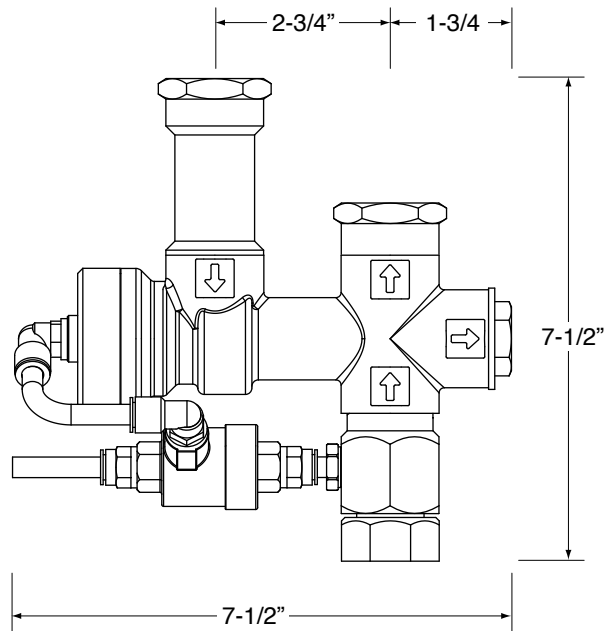


If the rainwater pump cannot deliver pressurized water because there is no rainwater in the cistern or during a power outage, the piston automatically slides back, allowing the backup water to flow to the outlet port while a check valve in the rainwater inlet prevents reverse flow back to the rainwater pump. An integral double-check valve prevents cross-contamination of the backup water source during the switchover operation, but for additional protection an external reduced-pressure backflow preventer may be required by local codes. During the switchover there is also a small discharge from the relief valve, so a short hose is provided to divert this in the desired direction.



PHYSICAL CHARACTERISTICS

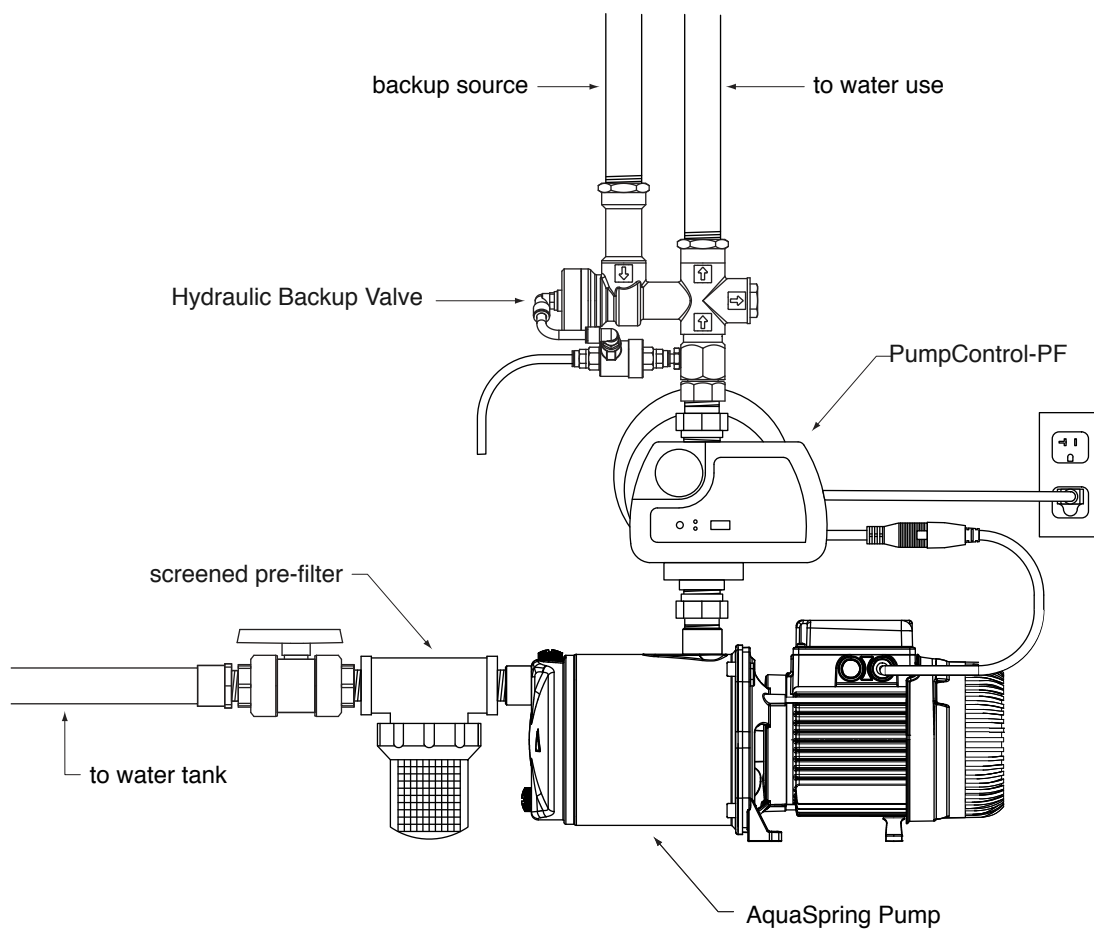
| Inlets | Outlets | Max Flow | Max Pressure | Max Temp | Size | Weight |
|--------|---------|----------|--------------|----------|-----------|--------|
| 1" fpt | 1" fpt | 50 gpm | 150 psi | 120°F | 8 x 8 x 3 | 4.5 lb |



INSTALLATION WITH SURFACE PUMPS

The Hydraulic Backup Valve can be used with any surface pump that delivers continuous pressure, such as a pump controlled by an external electronic pump controller, a pump controlled by an internal electronic pump controller, or a pump controlled by a pressure tank with a pressure switch. If the pump is deactivated by a dry-run protection system, the Hydraulic Backup Valve will not revert to the rainwater supply until pump pressure is restored, which means the pumping system must be designed to automatically attempt to re-prime until the next rainfall. If this is not possible, a low-water float switch should be employed to disconnect power to the pump before it can run dry.

Complete rainwater pumping and backup-integration system consisting of AquaSpring surface pump, PumpControl-PF controller, and Hydraulic Backup Valve.



INSTALLATION WITH SUBMERSIBLE PUMPS

The Hydraulic Backup Valve can be used with any submersible pump that delivers continuous pressure, such as a pump controlled by an external electronic pump controller, a pump controlled by an internal electronic pump controller, or a pump controlled by a pressure tank with a pressure switch. If the pump is deactivated by a dry-run protection system, the Hydraulic Backup Valve will not revert to the rainwater supply until pump pressure is restored, which means the pumping system must be designed to automatically attempt to re-prime until the next rainfall. If this is not possible, a low-water float switch should be employed to disconnect power to the pump before it can run dry.

Complete rainwater pumping and backup-integration system
consisting of AquaDiver submersible pump with floating intake,
PumpControl-PF, and Hydraulic Backup Valve

