

Purge Valve Installation Instructions

Description of Operation

The purpose of the purge valve is to eliminate the temperature rise of water inside the Hallett unit. This is important in situations where there is little or no water usage over long periods of time and the water has a high mineral content. Often the UV Transmittance (UVT) of the water will drop when the water temperature rises and when the UV unit detects this change in water quality, it signals an alarm. The purge valve is designed to prevent this change in water UVT and prevent dissolved minerals precipitating out of the water.

The purge valve is controlled by a temperature switch. If the water remains stagnant within the Hallett unit, the temperature of the water will rise thus setting off the temperature switch. This in turn opens the purge valve allowing cool water to flow through the unit. If there is constant water usage through the Hallett unit, the water will remain cool and the purge valve will not open. During periods of no water usage, approximately 1-2 liters (0.5 gallon) of water will be run to drain every hour (depending on site conditions).

If pressure tank or reservoir is downstream of unit see installation details in Figure 3.

Items Supplied (See Figure 1)

- Purge valve complete with compression fitting and flow limiting device (6 Watt max.)
- Temperature switch (set at 30° C)
- AC adapter (24VAC output)
- ¼" tubing
- Silicone thermal transfer paste
- Cable Tie

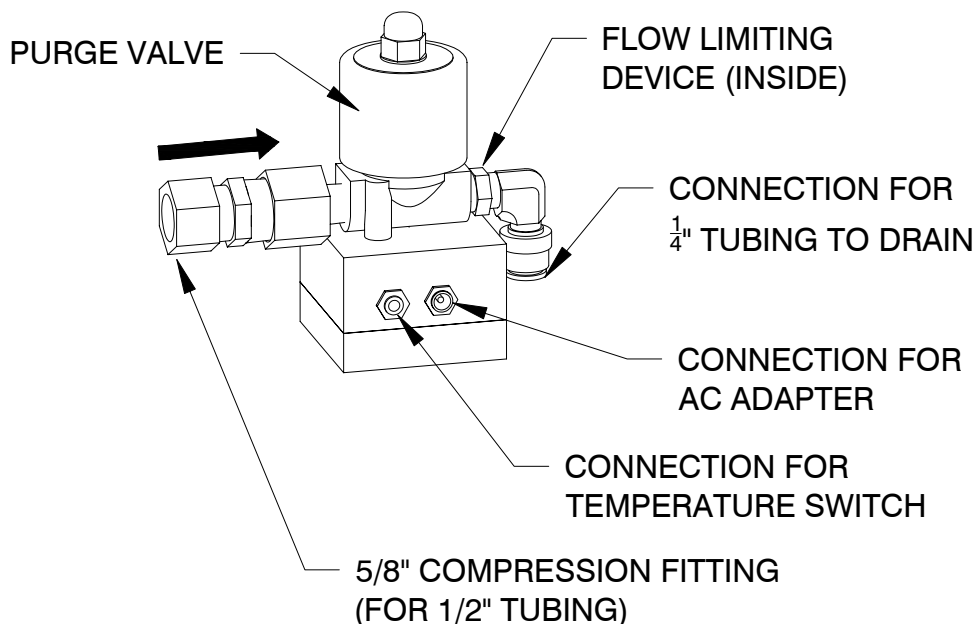


FIGURE 1

Items Required

120 VAC receptacle

Drain for water

Tee with 1/2" copper tubing at branch

See tip at end of section before beginning installation.

The installation of the purge valve should be done in compliance with all applicable federal, state/provincial, and local regulations.

Hallett unit installed downstream of pressure tank or reservoir

If the Hallett unit is installed downstream of the water supply (pressure tank or reservoir), install the purge valve anywhere downstream of the Hallett unit. This will ensure cold water will flow in the bottom of the unit and out the top of the unit. **This is the preferred installation location.** See Figure 2.

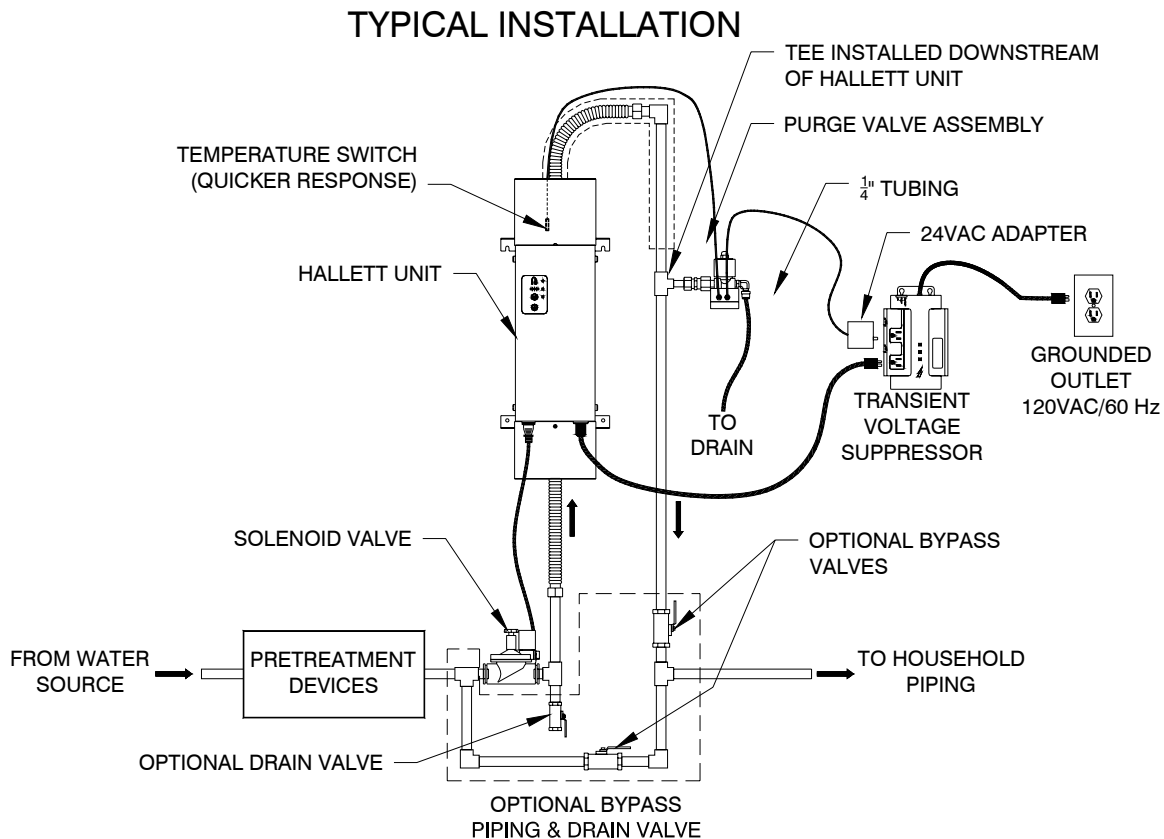


FIGURE 2

The temperature switch should be installed on the outlet hose just above the outlet fitting of the unit – the top cover must be removed to accomplish this. Apply some silicone paste between switch and hose to improve thermal transfer. Fasten the switch against the hose with the cable tie – be careful not to crush the switch. Make sure the switch is secure and is making as much contact with the hose as possible.

Run the ¼” tubing to a drain. **The tubing must be secured or it may move during purging operation.** Use cable ties where possible.

Hallett unit installed upstream of pressure tank or reservoir

If the Hallett unit is installed upstream of the water supply (pressure tank or reservoir), the purge valve **cannot** be installed downstream of the Hallett unit as shown in Figure 2. This will only cause water to flow from the reservoir out through the purge valve to drain. There will not be any water flow through the Hallett unit. This type of arrangement requires the purge valve to be installed just upstream of the Hallett unit but downstream of the solenoid valve. See Figure 3. When the purge valve opens, water will flow from the reservoir backwards through the unit and through the purge valve to drain. **Note that water cannot flow backwards through the solenoid shutoff valve** – this is the reason the purge valve must be between the solenoid valve and the Hallett unit. **Water cannot flow backwards if any check valves exist in the line so their presence has to be confirmed.** The temperature switch should be installed just above the outlet of the unit.

Operation

Connect both the temperature switch and AC adapter to the purge valve. Plug in the AC adapter. The system is now set to operate when the water temperature rises above set point. The flow limiting device exists to reduce the discharge of water so only a couple of liters of water are expelled. This device is preset and located within the ¼” quick connect fitting.

Tip: Install the purge valve and drain tubing first, leaving the temperature switch loose. You may force the valve to work by shorting the temperature switch. First, plug in the AC adapter into a grounded outlet and then complete the connection at the valve – this will supply the power to the valve. Next place a metallic object such as a paper clip into the temperature switch port located at the valve (this is low voltage and harmless). This action will short the temperature switch contact thus energizing the solenoid valve. When the valve is energized, the water should then flow through the valve and then out through the tubing. Once the operation is verified then plug in the temperature switch at the valve.

You may also force the valve to open by heating the temperature switch either by a heat gun or low flame. **Be sure to not damage the wires or burn you fingers!** The flow of water may then be verified through the valve and tubing. Once satisfied that the system works correctly, the temperature switch may be installed at the flexible hose.

**INSTALLATION WHEN PRESSURE TANK
(OR WATER RESERVOIR) IS DOWNSTREAM OF TANK
AND WATER HAS TO RUN BACKWARDS THROUGH UNIT**

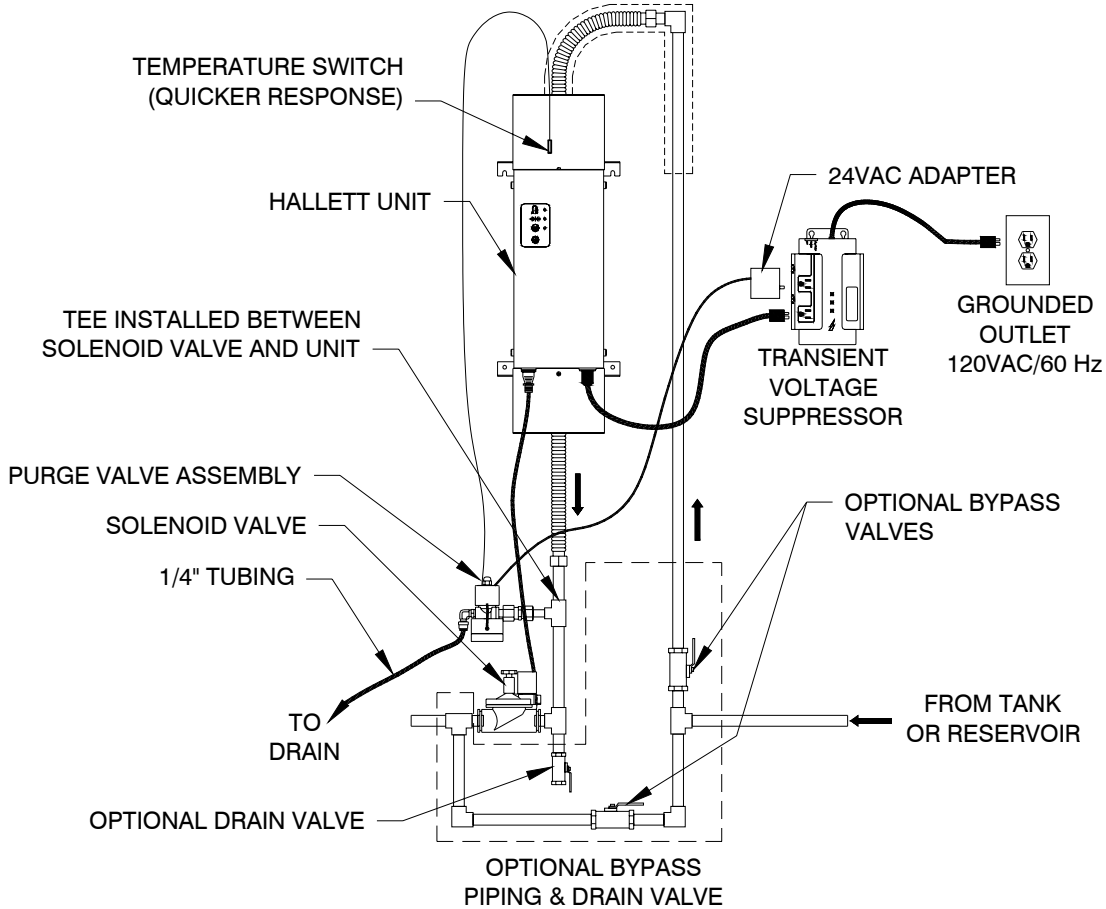


FIGURE 3