TOWLE WHITNEY

Booster Pump & Mixing Valve Systems

RESIDENTIAL STORAGE

USING WATER HEATERS

When should you consider installing water storage?

- The Booster Pump System needs adequate supply of water [by volume] to meet the demand of the application
- If the city water supply or water from a well does not provide sufficient volume of water to match the rate of consumption of water for various applications inside the house, For e.g. Showers, Washing machines, Dishwashers etc. then there is a significant drop in the water pressure in spite of installing a Booster Pump System
- In this case, it is recommended to install storage tanks
- Using water heaters for storage is a good option because water heaters provide isolation and have built in ports for incoming and outgoing water
- A couple of water heaters (which are not plugged into the power supply) connected in parallel, provide adequate amount of storage for a single family home

How to set up water heaters for storage:

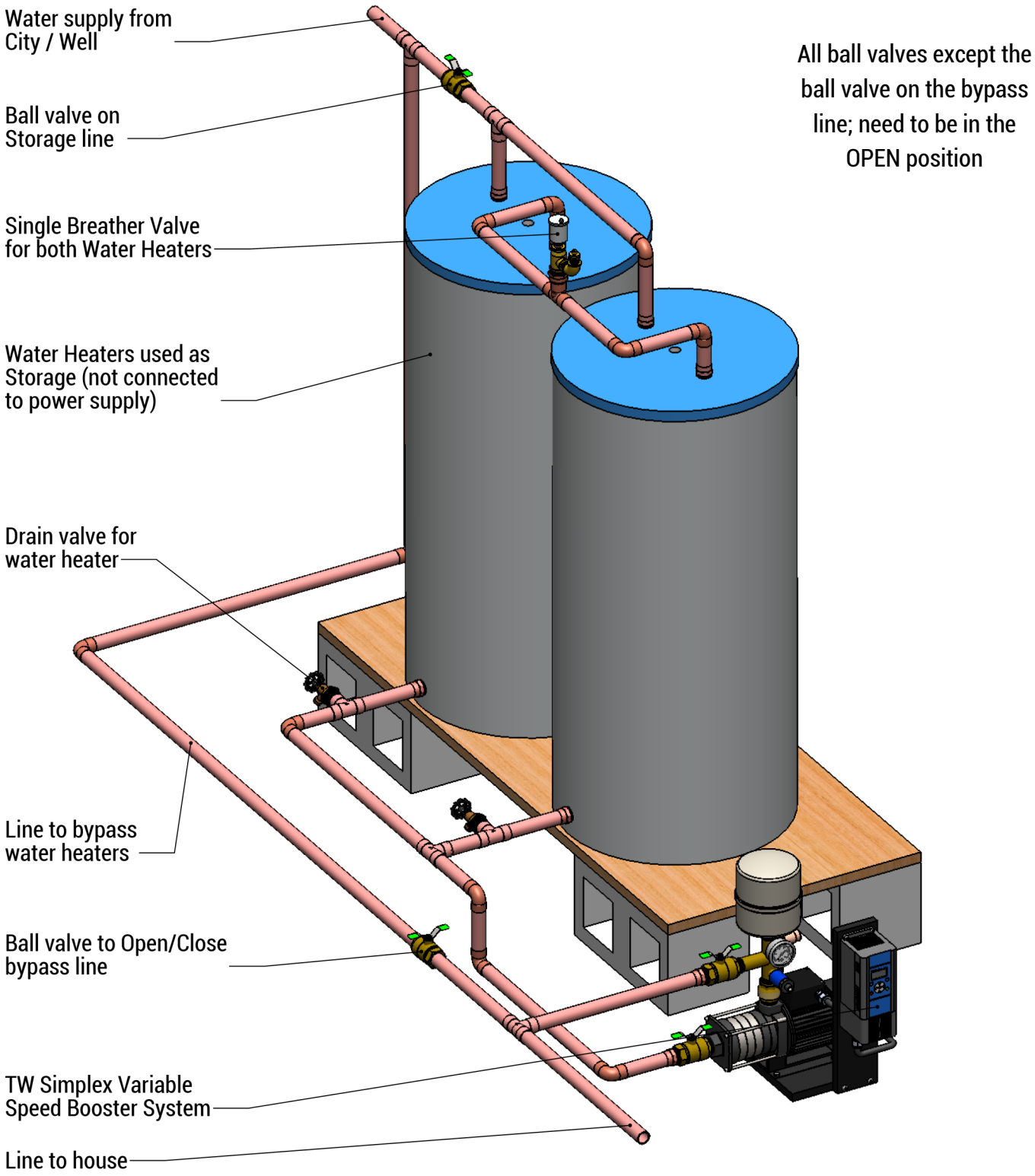
- Water heaters are kept in the appropriate location and should be slightly elevated using cinder blocks etc to ensure flooded suction to the Booster Pump System (Pump suction is located lower than water heater outlet)
- Incoming water supply from the City / Well is connected to the water heater inlet (**COLD WATER SIDE**)
- A Breather valve is mounted on the water heater outlet (**HOT WATER SIDE**) to prevent uneven expansion during filling / emptying of the water heater
- Outgoing water supply to the booster system is obtained from the drain outlet near the bottom of the water heater
- Shut off Valves are installed at appropriate locations to provide isolation
- A bypass line is installed to allow bypassing storage in case or repair or maintenance
- A Ball valve or a Check valve is installed to prevent backflow of water through the bypass line

Breather Valve:

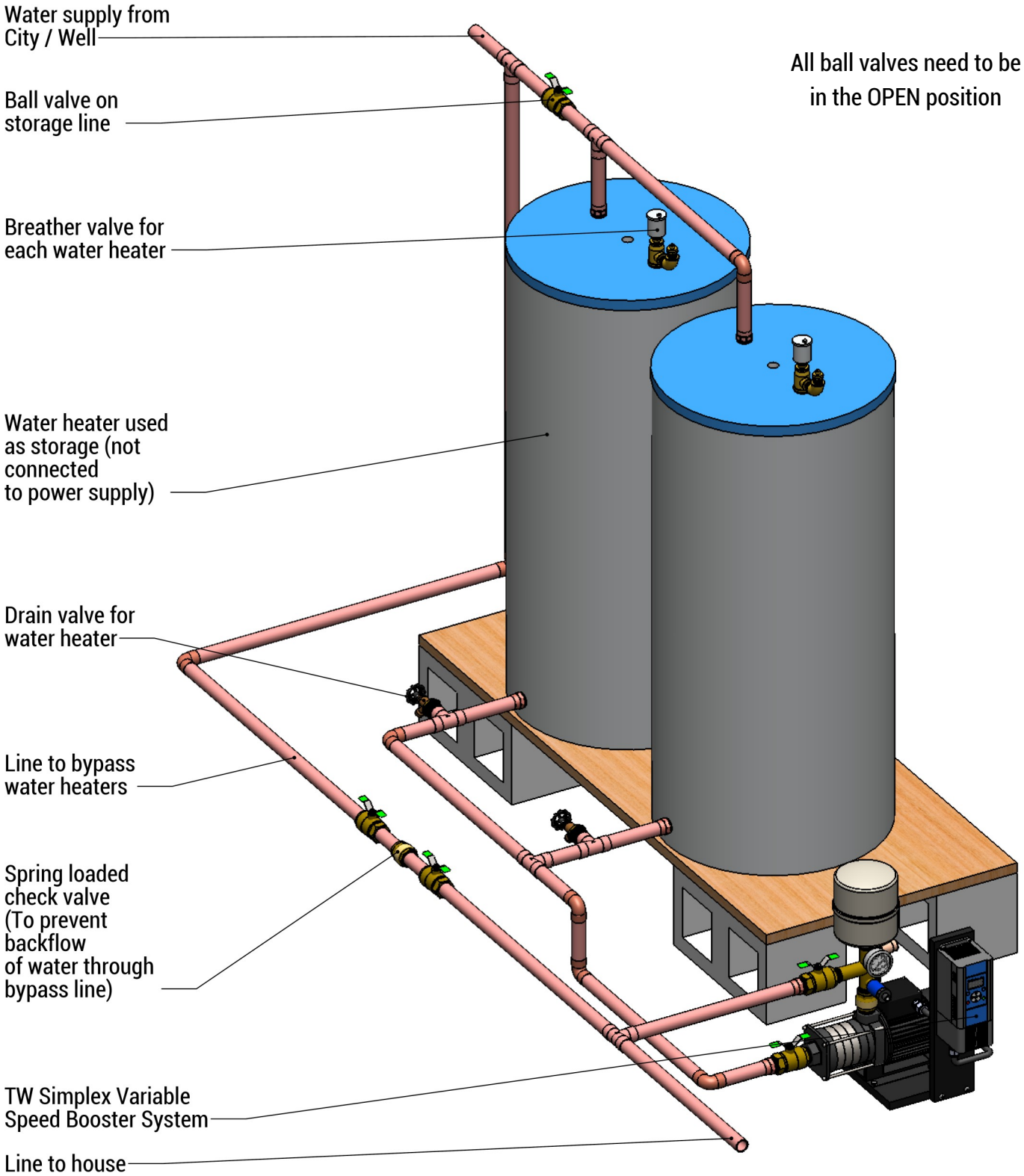
[Always installed on the hot water side]

If using a hot water heater [or any vessel that is not open to atmosphere] as a storage tank, a breather valve MUST be installed on the **HOT WATER SIDE** of the water heater to prevent uneven expansion of the tank during filling and emptying.

Configuration 1: Two Water Heaters used as storage with a Single Breather Valve



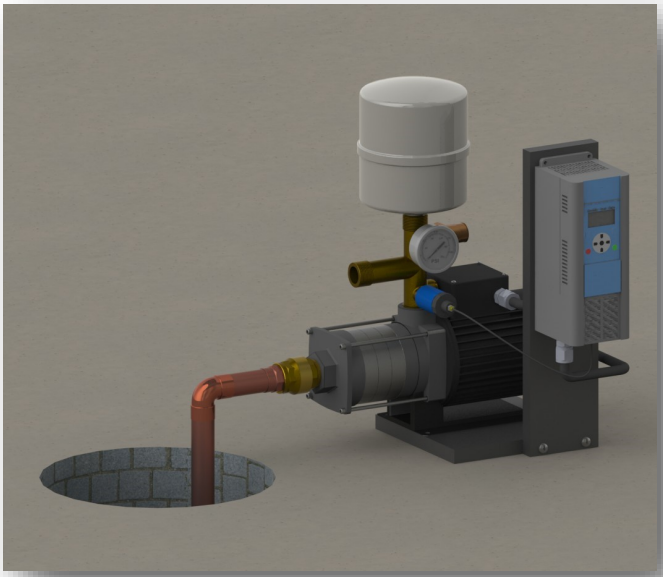
Configuration 2: Two Water Heaters used as storage with Two Breather Valves



Incorrect ways of installing a TW Booster Pump System

A Towle Whitney system cannot draw [lift] water from a well or from the top of a cistern. It needs **FLOODED SUCTION** to be able to boost water pressure.

Cannot draw water from the top of a cistern



Cannot draw water from a well