

O. Applications*

***NOTE:** Systems shown are primary/secondary piping systems. These recommended systems have a primary (boiler) loop, and secondary circuits for heating. The primary loop and secondary circuits have separate circulators. The use of other near boiler piping configurations could result in improper flow rates, leading to inadvertent boiler high limit shutdowns and poor system performance.

NOTE: In piping applications utilizing a single zone, it is recommended that the installer use flow / check valves with weighted seats at or near the appliance to prevent gravity circulation.

FIGURE NOTES:

1. This drawing is meant to demonstrate system piping concept only.
2. A mixing valve is recommended if the DHW temperature is set above the factory setting of 119°F.
3. Install a minimum of 12 diameters of straight pipe upstream of all circulators.
4. Install a minimum of 6 diameters of straight pipe up and downstream of all closely spaced tees.
5. Piping shown is Primary/Secondary.
6. The minimum pipe size for connecting an HTP indirect fired water heater is 1".
7. The minimum pipe size for connecting a 750 boiler is 2". The minimum pipe size for connecting a 1000 boiler is 2 1/2".
8. System flow (Secondary Loop) must be greater than the boiler's Primary Loop flow.
9. Installations must comply with all local codes.
10. In Massachusetts, a vacuum relief valve must be installed on the cold water line per 248 CMR.
11. See Multiple Boiler Manifold Piping chart, this manual, when sizing and installing a multiple boiler system.

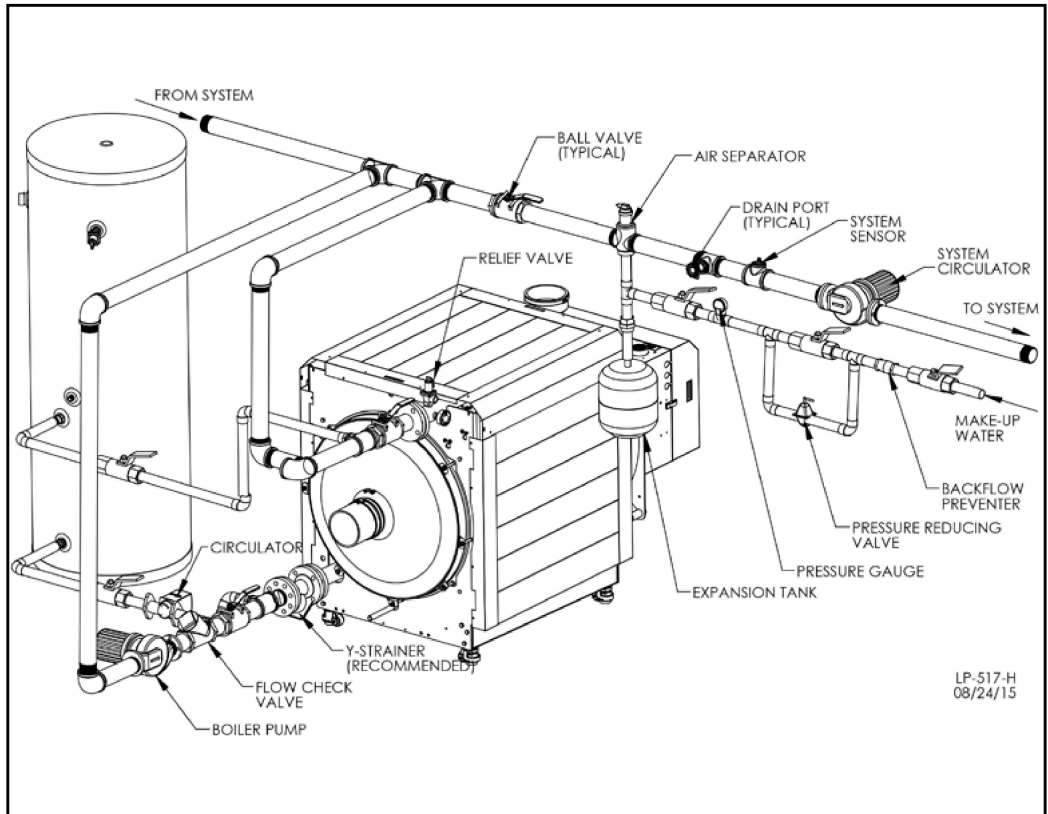


Figure 7 - Single Boiler Space Heating with Indirect Priority

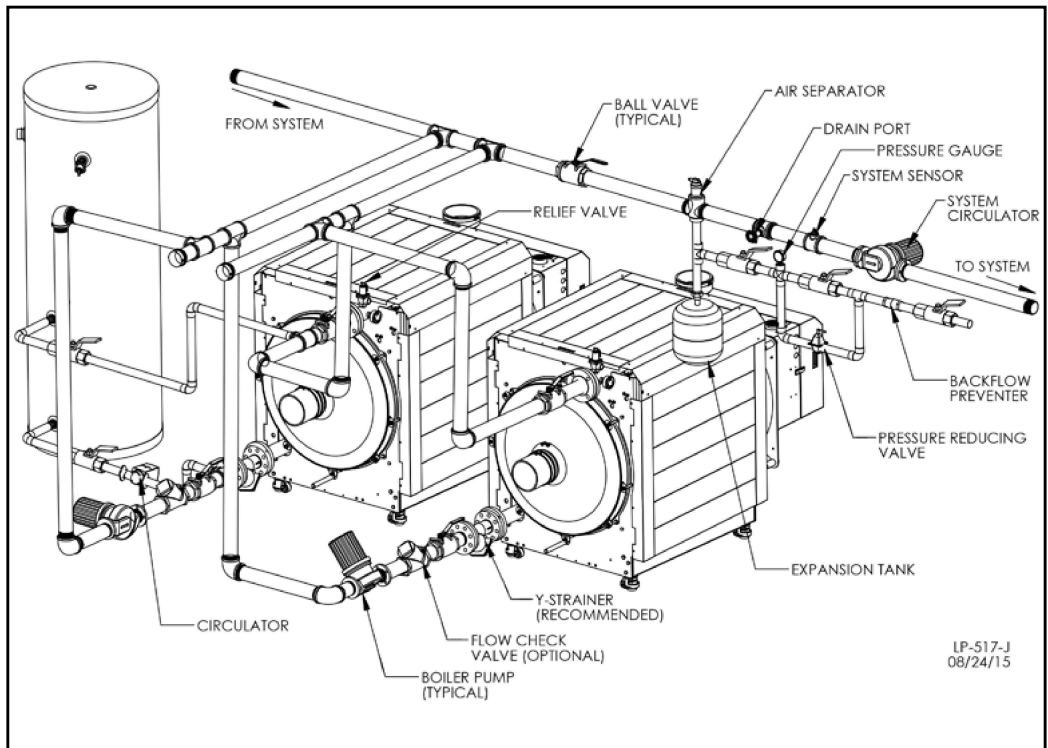


Figure 8 - Cascaded Boilers with Indirect Priority on One

WARNING

An ASSE 1017 thermostatic mixing valve is recommended on all indirect water heaters if the hot water temperature leaving the heater is above 119°F. Failure to do so could result in substantial property damage, serious injury, or death.

The piping will not support the weight of the circulators. Refer to the circulator manufacturer's instructions to properly support the circulator. Failure to comply with these instructions could result in property damage, severe personal injury, or death.

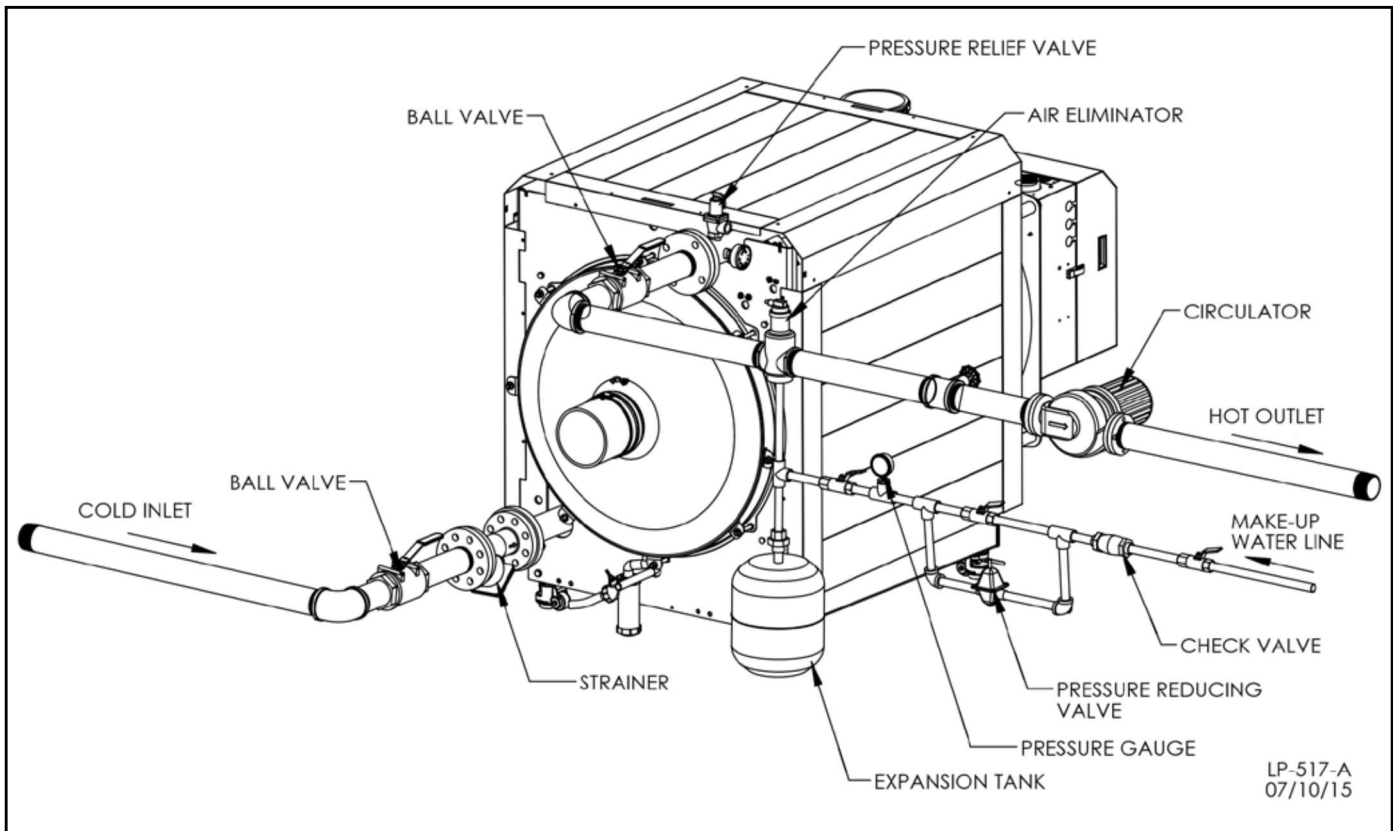


Figure 9 - Single Boiler Space Heating - Direct Piping

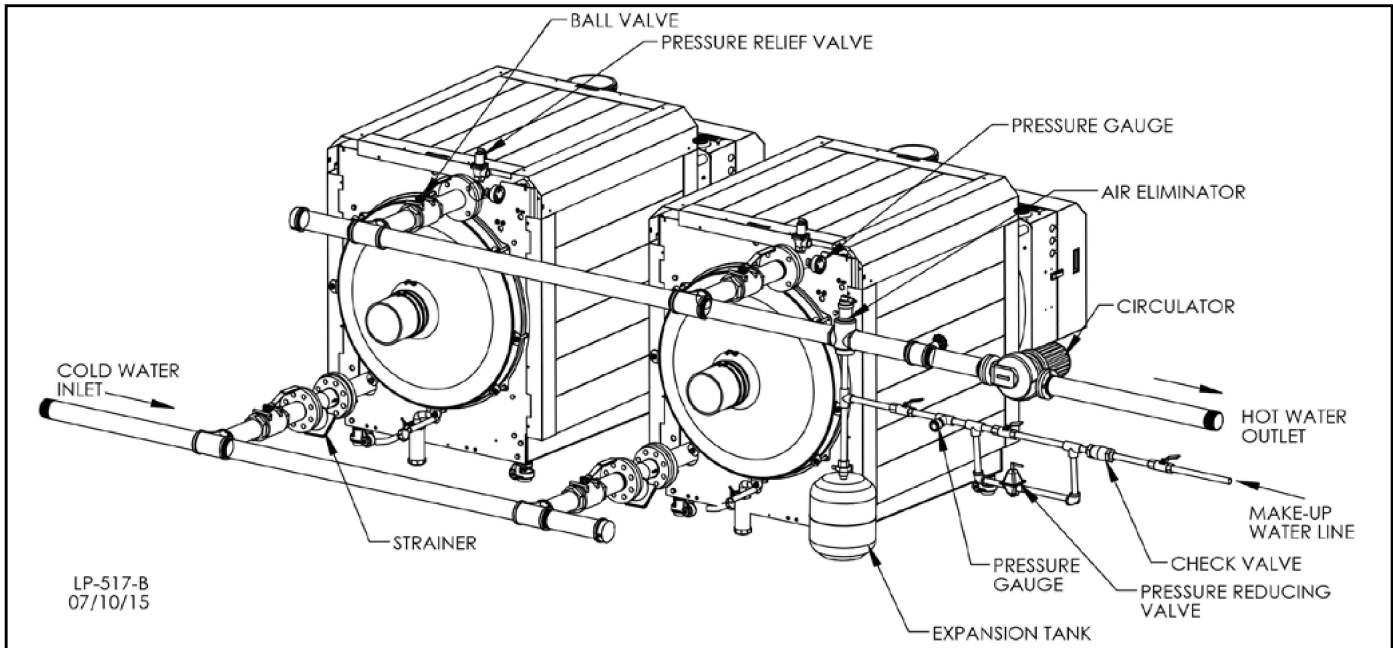


Figure 10 - Cascaded Boilers Space Heating - Direct Piping

FIGURE NOTES:

1. This drawing is meant to demonstrate system piping concept only.
2. Install a minimum of 12 diameters of straight pipe upstream of all circulators.
3. Install a minimum of 6 diameters of straight pipe up and downstream of all closely spaced tees.
4. The minimum pipe size for connecting a 750 boiler is 2". The minimum pipe size for connecting a 1000 boiler is 2 1/2".
5. Installations must comply with all local codes.
6. Direct piping is shown. VERY IMPORTANT: Minimum flow rates outlined in the manual must be maintained to minimize short cycling.
7. See Multiple Boiler Manifold Piping chart, this manual, when sizing and installing a multiple boiler system.

WARNING

The piping will not support the weight of the circulators. Refer to the circulator manufacturer's instructions to properly support the circulator. Failure to comply with these instructions could result in property damage, severe personal injury, or death.