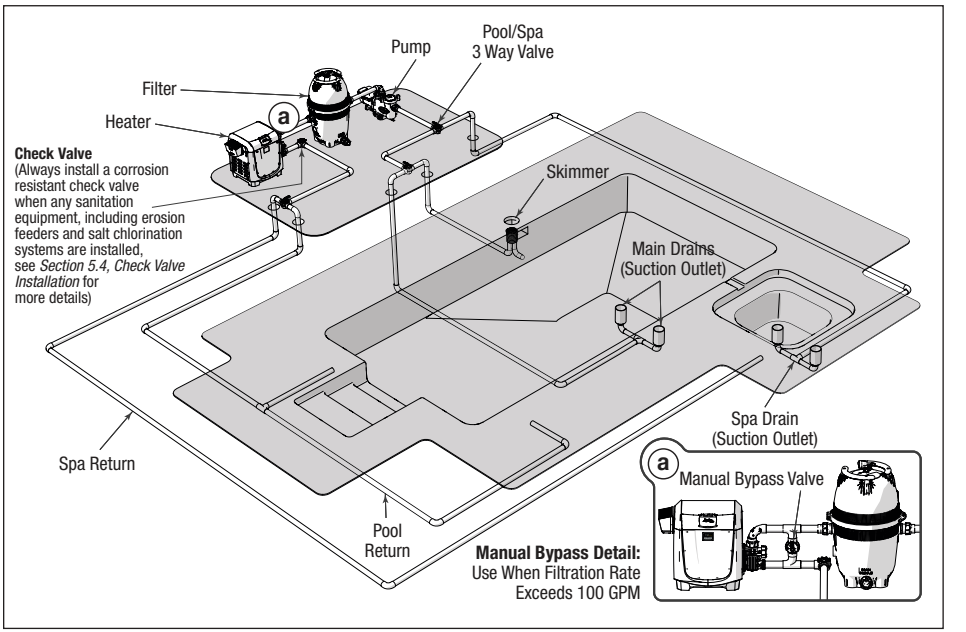


Figure 9. Typical Water Piping Configuration

5.1 Pump Sizing

For ASME heater models JXi400NC, JXi400PC, JXi260NC and JXi260PC please go to Section 13, Appendix A. ASME Header.

All JXi heaters utilize an internal bypass mechanism and thermal regulator valve (TRV) to accommodate flow rates delivered to the heater from a minimum of 30 gallons per minute (gpm) to a maximum flow of 100 gpm.

⚠ CAUTION

The system water pump must be capable of providing no less than 30 gpm of flow through the heater. Flow rates at less than 30 gpm may cause nuisance operation causing damage to the heater or causing the heater to turn off.

Model	Min gpm (lpm)	Max gpm (lpm)
JXi 200	30 (114)	100 (379)
JXi 260	30 (114)	100 (379)
JXi 400	30 (114)	100 (379)

Table 4. Recommended Flow Rate Adjustment

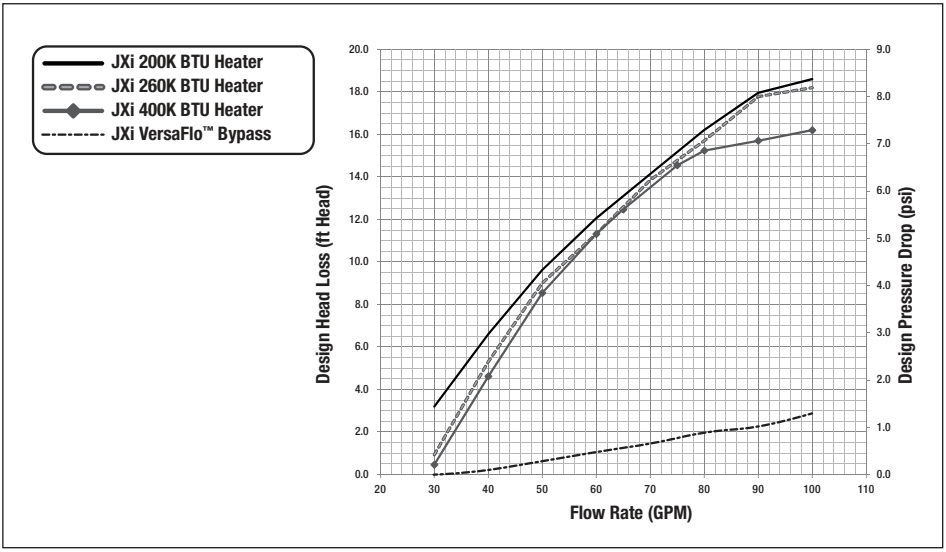


Figure 10. Head Loss Chart

For ASME heater models JXi400NC, JXi400PC, JXi260NC and JXi260PC please go to Section 13, Appendix A. ASME Header.

5.1.1 Manual Bypass Valve

A manual bypass valve is to be installed in any system in which the pump flow exceeds 100 gpm to the heater.

- Connect a valve between the water inlet and outlet. See inset "a." in *Figure 9*.
- Adjust the valve to bring the flow rate within the acceptable range. See *Table 4*.
- Remove the valve handle to avoid tampering.

5.1.2 Pump Sizing for New Pool Construction

When sizing a pump for the system, the head loss for all system components must be added together when determining the design flow rate. Component "Head Loss at Flow" curves are available from equipment manufacturers.

NOTE: In order to properly establish head loss at flow for a filter, remember that a "dirty" filter can typically add 10 psi of additional head loss (23 extra feet of head). This must be considered when sizing a pump for a new pool system.

5.1.3 Pump Sizing for Replacement in an Existing Pool

If the JXi heater replaces a different model of heater, determine if the existing pump is capable of providing the minimum flow of 30 gpm. JXi heaters are high efficiency heaters. Heaters typical of this construction may have higher head loss characteristics than the one being replaced.

⚠ CAUTION

Heater failure due to insufficient water flow is not covered under warranty. See measurements in the Head Loss Chart. See *Figure 10*.

5.2 Plumbing Connections

The heater has a standard 2 inch water manifold and coupling design. With this feature, only nominal two inch PVC or CPVC may be connected to the heater. However, by installing appropriate pipe adapters and two-inch pipe (supplied by the installer), any size existing pipe may be fitted to the heater.

5.2.1 Reverse Plumbing Connection

The JXi heater is shipped with the manifold on the right side by default. If necessary the water connections can be orientated to the left side by rotating the top panel of the appliance.

NOTE: The electrical raceway, transformer, PIB, Ignition control and voltage selector board are all accessed through the default front panel. Special considerations should be made for service clearance, see *Figure 2*, before the final location and orientation of the appliance is determined.

- Turn off all power to the heater at the breaker.
- Ensure that the pump is off and will remain off for the duration of the procedure.

a. Remove the four black screws securing the heater top panel to the heater body.

b. Lift the heater top panel. Be careful not to damage or apply undue stress to the user interface wiring.