

**1 UNPACK & IDENTIFY ALL ITEMS**

Owners Manual located on side of unit

Heater Heater Stand

Stand Leveling Bolts (2 per leg)

**OWNERS MANUAL**

Venting (optional)

Vent Terminations

Parts Bag

\*Bag contents:

- o-rings for quick disconnect arms
- gaskets for overthrow nuts
- fasteners
- fuses

Condensate Trap (loose on 129-199.1 only)

Pump Package

\*Additional parts in plastic bag located inside unit (front)

**2 STAND AND HEATER SET-UP**

Make sure rack is level, front to back and left to right.

All added components should be secured to the rack.

Unpack heaters/boilers and mount on rack—use caution when lifting.

Heater/boiler marked "Lead" should be closest to storage tank or heat sensing source.

Unpack and attach pumps to heaters and piping—per color coded dots.

Pumps should be pumping up into the heater/boiler.

Position hot water storage tank and connecting piping—per color coded dots.

24" Front clearance required for service

**3 WATER PIPING**

Hot Water

Cold Water Inlet

Expansion Tank

Connect Expansion Tank here

Drain Cap

Incorrectly sized piping will cause operational issues and void the warranty (see below)

(Common piping must be sized according to pages 29-37 in LIT91127U, Installation & Operating Manual)

**4 VENTING**

exterior wall

exhaust

intake

All inlet air and vent terminations MUST have the screen installed on exhaust as supplied by the factory

18" minimum 24" maximum

12" above max. snow level or 24" whichever is greater

12" above max. snow level or anything within 10 feet or 24", whichever is greater

24"

8" minimum

roof

intake

Correct termination venting is critical!  
One of the two methods must be used—not a combination of the two.

Total vent length includes both inlet and exhaust and must allow 5 feet for each elbow & piping plus elbow & tees

(Refer to pages 20-28 in LIT91127U, Installation & Operating Manual)

**5 GAS PIPING**

Auto Air Vent (keep cap loose) (Models 299-599 only)

Maximum gas pressure is 14" W.C.

Minimum gas pressure is 4" W.C. (with all gas appliances running)

Gas pressure may not vary more than 1" W.C. during operation, from minimum to maximum loads

gas line

gas full port shut off valve

gas supply header

All gas valves MUST be full port!

Common gas supply header MUST be sized for total gas load connected to it.

(See LIT91127U, Installation & Operating Manual, pages 14-19 for gas piping, gas line testing, and leak testing)

**6 CONDENSATE**

Remove label on open end (left or right end of PVC) and attach condensate drain

Full size pipe to drain. 1/4" per ft. pitch required.

Drain hose must not push more than 1" through the 3" slotted cap on the drain

(Refer to page 28 in LIT91127U, Installation & Operating Manual)

**7 ELECTRICAL** 208-240 volt, single phase

bottom of unit

Power In Field connected

To Pump

Tank Sensor

sensor location on tank (connect to terminals marked External Sensor on heater)

To Pump  
Blue wire to L  
Brown wire to N  
Green wire to GND

Cascade Connection Detail

Twisted shielded wire  
\* Maintain Polarity  
15 to 15 (+ to +)  
16 to 16 (- to -)

Cascade Connection (see detail above)

10 amp, 208 / 240 1 phase power supply

\*Extra fuses in spare parts bag

Maximum amperage draw per heater and pump package is 3.1 amps  
(See LIT91127U, Installation & Operating Manual, page 12-13)

**8 START-UP**

- Fill system with water & vent air (see item 3).
- Turn on gas and verify that there are NO LEAKS.
- Verify voltage and then turn on breaker supplying power to heater.
- Confirm that all aspects of installation meet local code.
- Turn on power switch on front of heater.
- Set temperature using red dial on front of heater.
- Allow heater to stabilize and verify that condensation is draining.
- Complete LIT91111, Start-Up Checklist.

(See LIT91127U, Installation & Operating Manual, pages 38-40)