



## START-UP OF STEAM AND BOILER WATER HEATERS

**\*\*FOR DETAILED INFORMATION SEE INSTALLATION & MAINTENANCE MANUAL \*\***

**WARNING:** These startup instructions are prepared for a qualified service installer, service agency or gas supplier and require and rely on the experience and training of these qualified gas appliance technicians to be safely completed. Attempting to follow these instructions without such training and experience can result in property damage, exposure to hazardous materials, personal injury or death.

1. When placing a unit into operation, open relief valve to purge air from top of tank and begin to fill the tank with cold water. Check for plumbing leaks. Be sure the tank is completely filled before closing the relief valve.
2. Push control switch, located on the control box, to "ON" to activate the control valves (steam or boiler water) and thermostats. Check the valves for proper operation.
3. Check operating thermostat settings. The operating thermostat is set at the factory at approximately 120°F and the upper operating thermostat (if supplied) is set at approximately 125°F. Adjustment may be made by turning the thermostat's dial to the desired temperature. The temperature limiting device is factory set at 200°F.
4. Push the operating switch to "OFF" before opening manual main steam or boiler water supply valve. The heating supply should be introduced gradually until all passages of the heat exchanger are filled
5. Start operation gradually. Do not admit steam or boiler water to the unit suddenly when empty or cold. Do not shock unit with cold fluid when unit is hot. . Slowly bring the unit up to temperature.
6. Do not operate unit under conditions in excess of those specified on nameplate.
7. Open nearby hot water tap to maintain a flow of water through the tank when starting up units. Regulate flow of water through the tank to allow the control valve to cycle off and on, and check operation of all safety and operating controls.
8. In all installations there should be no pulsation or water hammer since this causes vibration and strain with resulting leaks.
9. Retighten bolting on all gasketed joints after the heat exchanger has reached temperature to prevent leaks and gasket failures. Retightening should be done uniformly and in a diametrically staggered pattern
10. Complete the attached startup report.

**Important – Contact PVI Customer Service, 800-433-5654, if any recommended setpoint or analysis reading falls outside of the recommended ranges before completing startup.**



# START-UP REPORT

## STEAM/WATER - TO - WATER HEATERS

### QUICKDRAW<sup>®</sup> – CSX – ISX – HOT WATER GENERATOR

**Warning: Startup must be performed by a qualified service installer, service agency or the gas supplier.**

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Job Name: \_\_\_\_\_

Address: \_\_\_\_\_

#### GENERAL INFORMATION

Restart?  Yes  No      Installation is:  New  Replacement/Renovation  Indoor  Outdoor  
Primary operating voltage: \_\_\_\_\_ VAC      Voltage from neutral to earth ground: \_\_\_\_\_ (should be zero)  
Thermostat Set Points: Hi-Limit \_\_\_\_\_ °F      Upper Operating: \_\_\_\_\_ °F      Operating \_\_\_\_\_ °F  
Operating (optional): \_\_\_\_\_ °F      Operating (optional): \_\_\_\_\_ °F  
Cold Water Inlet Temperature: \_\_\_\_\_ °F      Hot Water Outlet Temperature: \_\_\_\_\_ °F  
T & P Relief Valve(s) plumbed to a suitable drain?  Yes  No

#### WATER HEATER INSTALLATION

Type of piping connected to heater:  Copper  Brass  Galvanized  
Is there a check valve in the supply water piping?  Yes  No  
Is there a water softener on the cold water supply?  Yes  No      Operational?  Yes  No  
Is there a mixing valve on the hot water supply?      If yes; temperature setting: \_\_\_\_\_ °F  No  
Is there expansion relief in the cold water supply? If yes, what type:  tank  valve  No  
Is there a recirculation loop?  Yes      Circulating pump horsepower: \_\_\_\_\_  No  
Is there a floor drain in the room?  Yes  No

#### STEAM SYSTEM

Static Steam Pressure: \_\_\_\_\_ PSI      Flow Steam Pressure: \_\_\_\_\_ PSI      Operating Steam Pressure: \_\_\_\_\_ PSI  
Is steam supplied from utility company or installed boilers  
Is there a condensate trap in the steam supply main?  Yes  No  
Is there lift in the condensate return line? (Before receiver tank)  Yes  No      Lift in feet: \_\_\_\_\_ FT  
Is there a steam strainer ahead of the appliance steam valve?  Yes  No      Size: \_\_\_\_\_ in.      Mesh: \_\_\_\_\_  
Is there a steam trap ahead of the appliance steam valve?  Yes  No  
Is there a steam trap in the appliance condensate line?  Yes  No  
Does steam flow stop completely when steam valve is de-energized?  Yes  No



Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

**HEATING WATER SUPPLY**

Is heating water supplied from boiler?  Yes  No

If No, describe: \_\_\_\_\_

Heating water pump flow rate: \_\_\_\_\_ GPM Pump Horsepower: \_\_\_\_\_ HP

Supply water temperature: \_\_\_\_\_ °F Return Water temperature: \_\_\_\_\_ °F

Comments: \_\_\_\_\_

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Service Company Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Service Company Address: \_\_\_\_\_

Start-up Performed By: \_\_\_\_\_ Date: \_\_\_\_\_

Customer Representative: \_\_\_\_\_ Date: \_\_\_\_\_

**Important: You must submit the original copy of the completed form to your PVI representative before the warranty will become effective on this product. Contact Customer Service for assistance at 1-800-433-5654.**