

PIONEER HEATING APPLIANCE



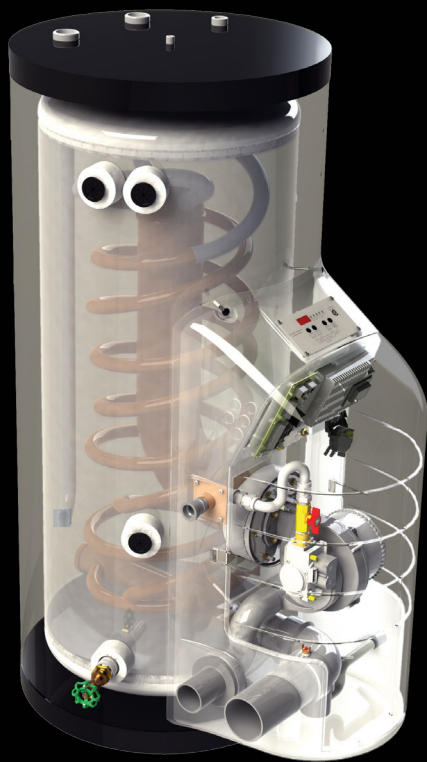
ADVANCED HEATING AND  
HOT WATER SYSTEMS



The **Pioneer** is a trailblazing new appliance that installs like a mid-efficiency boiler with the performance of a high-efficiency product.



## FEATURES AND BENEFITS



### **High Efficiency Product**

With a 95% maximum operating efficiency, this product uses less energy to meet desired heating loads and significantly reduces energy costs.

### **The Alternative to Mid-Efficiency Products**

With ample thermal mass and no primary/secondary piping required, this unit is a replacement for mid-efficiency units.

### **Hydronic Stabilization**

Stored hot water, or "thermal mass", in the stainless steel tank provides a buffer against cycling during low load conditions.

### **Low Maintenance Design**

The advanced hybrid cupronickel/stainless steel heat exchanger eliminates scale buildup through rapid thermal expansion/contraction, and its "down fire" characteristics allow for rapid removal of acidic condensate.

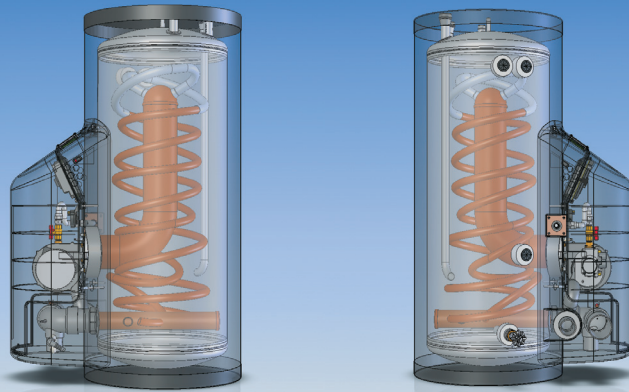
### **Single Loop Installation**

The heat exchanger, constantly surrounded by water, is protected against "flashing" due to low flow conditions, eliminating the need for a primary/secondary piping setup.

# PIONEER



# COMPETITIVE EDGE



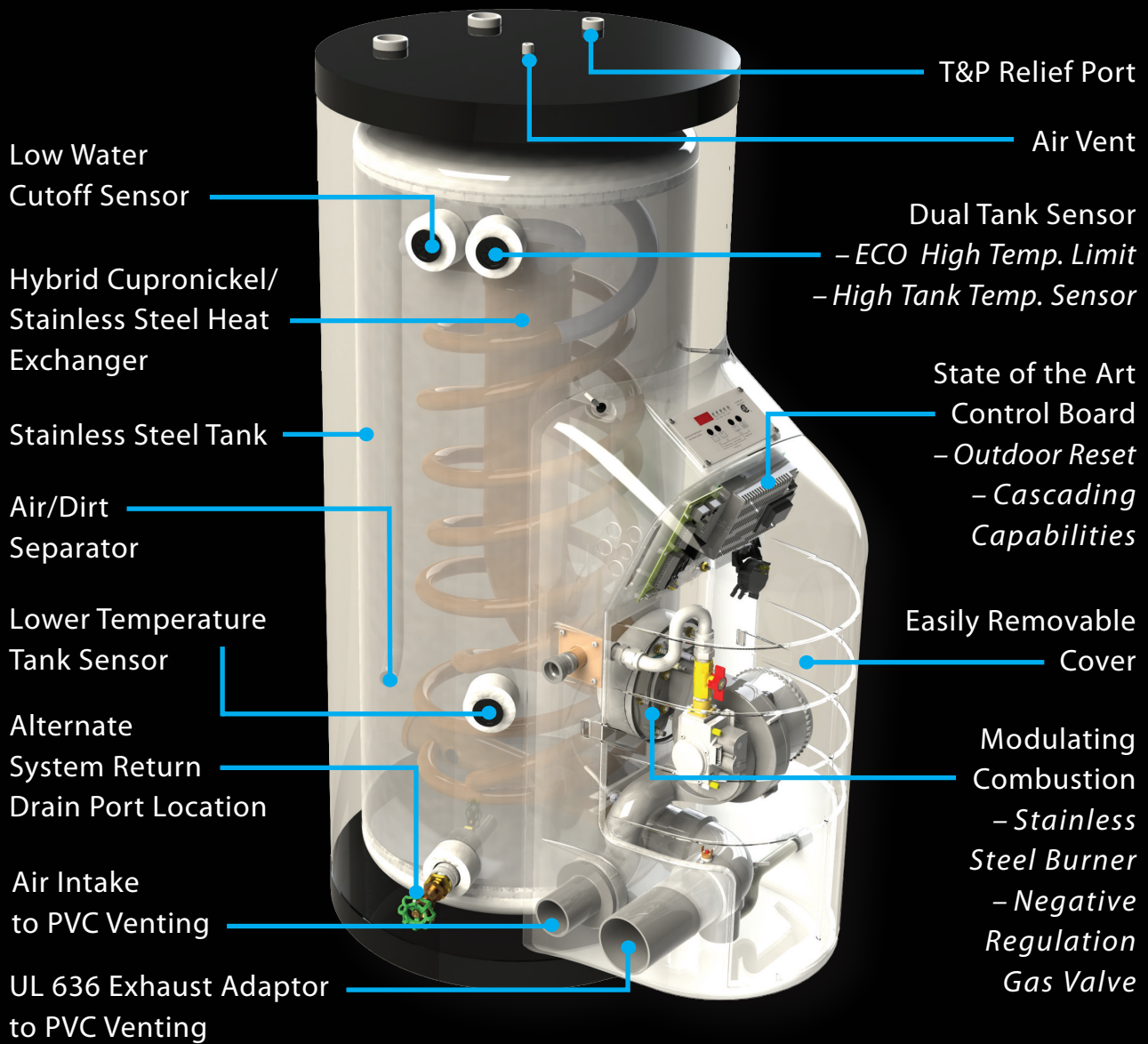
|  | Pioneer Heating Appliance        | Atmospheric Cast Iron Boilers        | Atmospheric Copper Fin Boilers       | Power Vented Non-Condensing Cast Iron Boilers | Condensing Low Mass Boilers      |
|--|----------------------------------|--------------------------------------|--------------------------------------|---|----------------------------------|
| <b>Efficiency</b>                            | ★ 95%                            | ≤ 85%                                | < 85%                                | ≤ 87%   | ★ ≥ 90%                          |
| <b>Modulation</b>                            | ★ YES                            | NO                                   | NO                                   | NO  | ★ YES                            |
| <b>Vent Category</b>                         | ★ IV                             | I                                    | I                                    | ★ II or IV                                    | ★ IV                             |
| <b>Required Vent Materials</b>               | ★ PVC or AL29-4C Stainless Steel | Type "B" Materials or lined chimneys | Type "B" Materials or lined chimneys | AL29-4C Stainless Steel                       | ★ PVC or AL29-4C Stainless Steel |
| <b>Controls</b>                              | ★ Modulating                     | On/Off                               | On/Off or Staged                     | On/Off or Staged                              | ★ Modulating                     |
| <b>Piping Setup</b>                          | ★ Single Loop                    | ★ Single Loop                        | Primary/Secondary                    | ★ Single Loop                                 | Primary/Secondary                |
| <b>Built in Air/Dirt Separator</b>           | ★ YES                            | NO                                   | NO                                   | NO  | NO                               |
| <b>Thermal Mass for System Stabilization</b> | ★ YES                            | ★ YES                                | NO                                   | ★ YES   | NO                               |
| <b>Eligible for Federal Tax Credit</b>       | ★ YES*                           | NO                                   | NO                                   | NO  | ★ YES                            |

The Pioneer Heating Appliance meets or exceeds the competition in all 9 of the categories highlighted in the chart above. The cutting-edge features, technological advancements, ease of serviceability, and energy savings make this product a superior alternative to mid-efficiency cast iron and copper fin boilers.

The figures above are based on averages. Data was collected from various competitor sources. \*The Pioneer qualifies as a condensing commercial water heater.

**Changing the Course  
of Hydronics...**

# A Closer Look At HTP's Pioneer Heating Appliance



## Maintenance and Service Made Easy

Low maintenance heat exchanger design: 5" diameter combustion tube which connects to 1-1/8" down firing spiral tubes.

The Pioneer's entire combustion and control system can be accessed by removing a light, molded cover.

Easy access to control board, display and field connection board without the need for tools.

The gas valve/burner assembly is detached by removing 6 simple nuts and one end of the flexible gas line to the valve.

# EASE OF INSTALLATION



Space Heating Appliance and  
Buffer Tank In One

No Boiler Loop Required

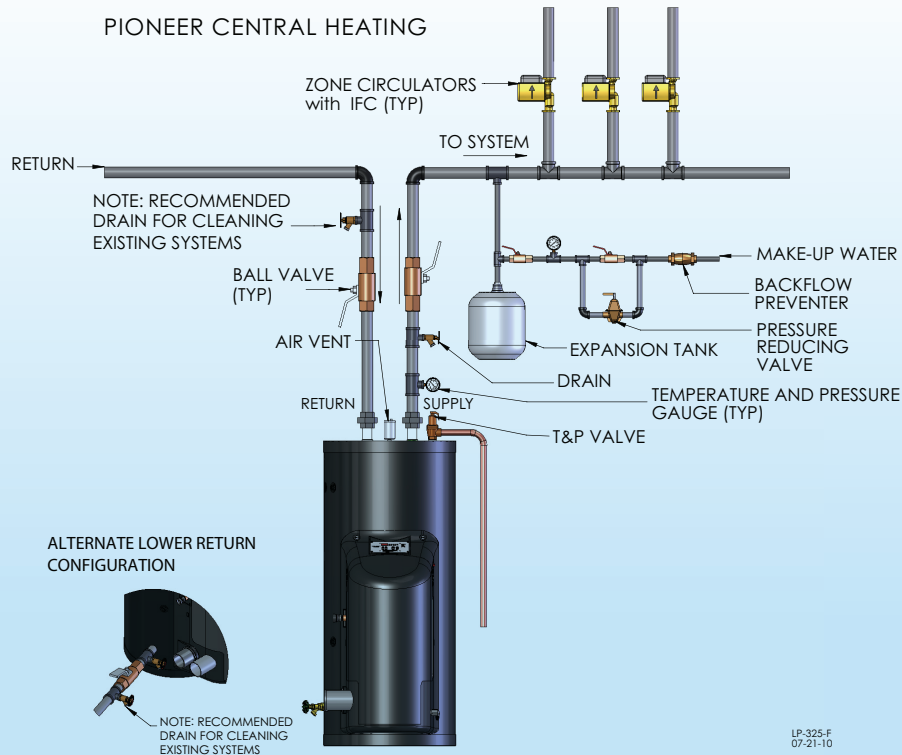
Direct Connection to the Primary  
Heating Loop

Low Pressure Drop

PVC Venting Material  
- *Easier Installation*  
- *Reduced Cost*

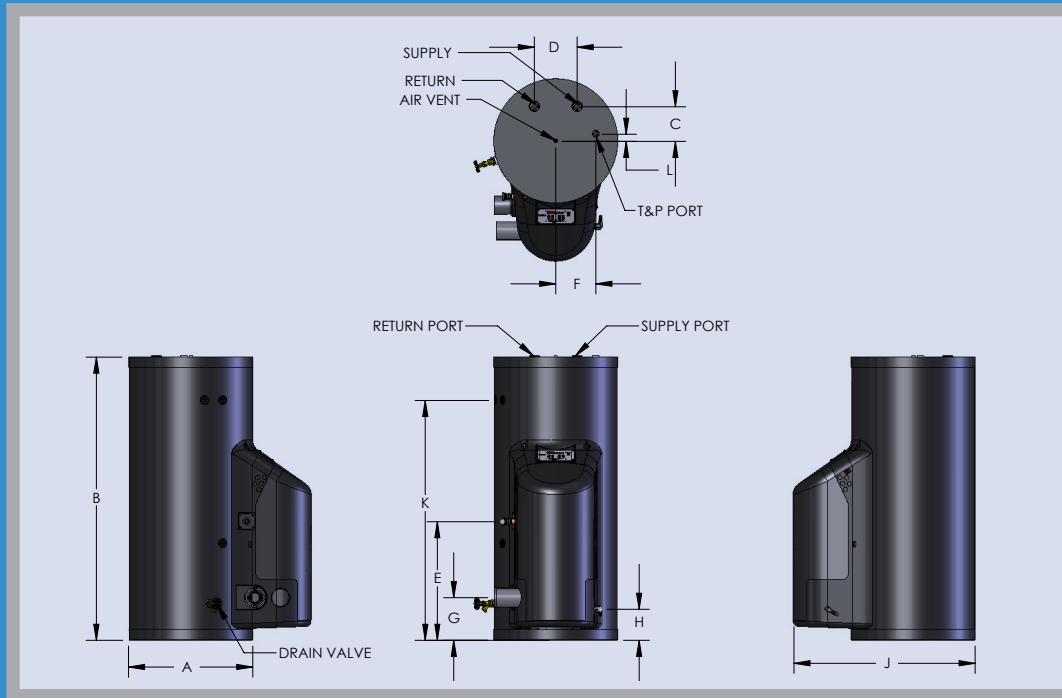
Simplified Retro Fitting for Cast Iron  
Boiler Replacements

Intake Combustion Air Pulled from Room



Advancing Hydronics  
Technology...

# Pioneer Heating Appliance Dimensions and Specifications



PIONEER DIMENSIONS AND SPECIFICATIONS

| MODEL #   | MODULATION RANGE | AIR INTAKE/ EXHAUST VENT SIZE | SUPPLY/ RETURN SIZE | AIR VENT | GAS CONN. | SHIPPING WT. (lbs.) | GAL. | A   | B   | C      | D  | E   | F      | G  | H  | J   | K   | L      |
|-----------|------------------|-------------------------------|---------------------|----------|-----------|---------------------|------|-----|-----|--------|----|-----|--------|----|----|-----|-----|--------|
| PHR100-55 | 35,000- 100,000  | 2"                            | 1-1/4" NPT          | 1/8" NPT | 3/4"      | 175                 | 55   | 23" | 53" | 6-1/2" | 8" | 22" | 7-1/2" | 8" | 6" | 34" | 45" | 1-1/4" |
| PHR130-55 | 35,000- 130,000  | 2"                            |                     |          |           |                     |      |     |     |        |    |     |        |    |    |     |     |        |
| PHR160-55 | 40,000- 160,000  | 3"                            |                     |          |           |                     |      |     |     |        |    |     |        |    |    |     |     |        |
| PHR199-55 | 40,000- 199,000  | 3"                            |                     |          |           |                     |      |     |     |        |    |     |        |    |    |     |     |        |

All standard Pioneers are built as natural with LP conversion kits included.

### STANDARD FEATURES

- Up to 95% Thermal Efficiency
- Modulating Burner
  - 5:1 Turndown Ratio
- Venting Options
  - Room Air Intake
  - Concentric
  - Flexible Vent Pipe
  - Up to 200 combined ft.
- Single Loop Installation
- 12 Year Limited Warranty

### INCLUDED IN THE BOX

- Pressure and Temperature Gauge
- 30 PSI Temperature and Pressure Relief Valve
- Intake PVC Tee w/ Screens
- Exhaust PVC Coupling w/ Screens
- Installation Manual
- Outdoor Sensor

### OPTIONAL EQUIPMENT

- System Sensor
- Indirect Tank Sensor
- 3", 4", 6" Stainless Steel Outside Termination Vent Kit
- 3" PVC Concentric Vent Kit
- U.L. 353 Compliant Low Water Cutoff w/ Manual Reset
- Alarm System to Monitor Failures
- PC Connection Kit
- Condensate Neutralizer

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