



Advanced Heating  
& Hot Water Systems

# Pioneer

A Trailblazing Appliance that Installs with  
the Ease of a Mid-Efficiency Boiler but has the  
Performance of a High-Efficiency Product



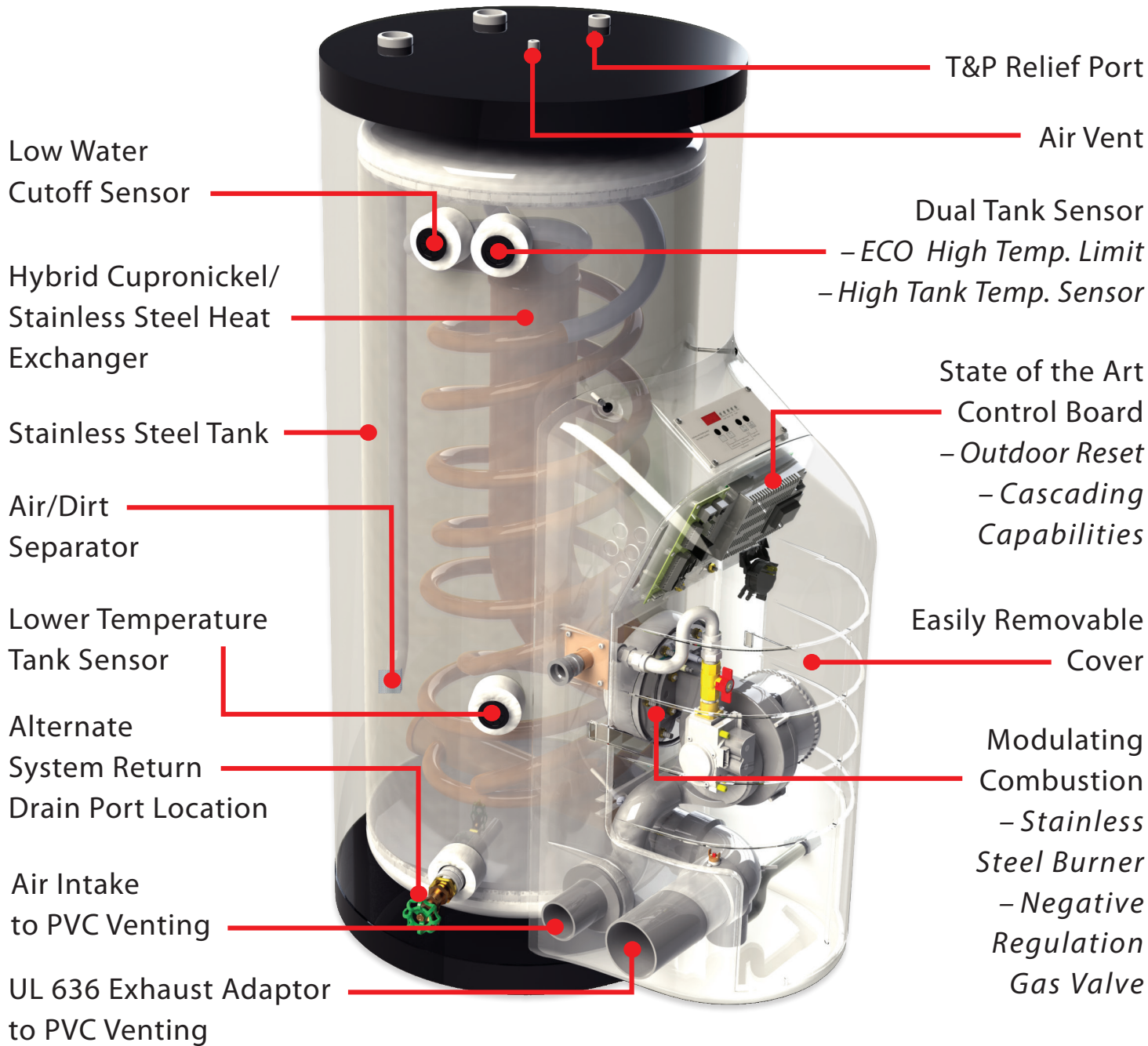
## HIGH MASS

- Modulation provides a 5:1 turndown ratio
- Thermal mass in the stainless steel tank provides a buffer against cycling during low load conditions
- Low maintenance & space saving design
- Single loop installation: the heat exchanger is immersed in water and protected against "flashing" due to low flow condition
- Up to 95% thermal efficiency
- Retro-fit: ideal for replacement systems, minimize the changes to piping; no primary secondary piping needed
- Room air intake, PVC and CPVC venting with combined vent lengths up to 200' in 3" pipe & up to 85' in 2" for the 100 & 130 models
- Built in dirt & air separator
- 12 year limited warranty



Up to 95% Efficient • 5:1 Turndown Ratio • Single Loop Installation

# A Closer Look



## 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 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.

**Extremely Durable and Reliable – Minimal Maintenance Required**

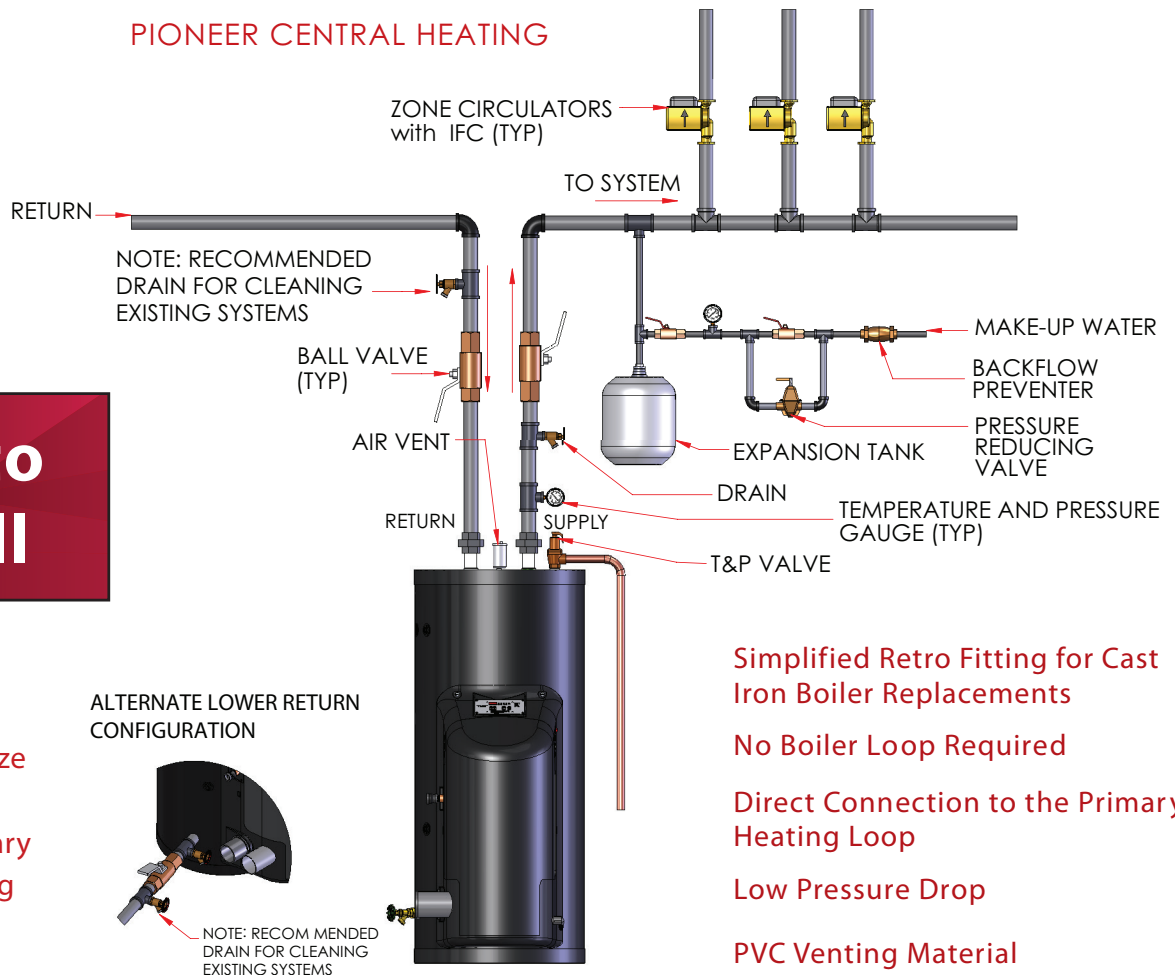
# The Pioneer's Competitive Edge

	Pioneer Boiler	Atmospheric Cast Iron Boilers	Atmospheric Copper Fin Boilers	Power Vented Non-Condensing Cast Iron Boilers	Condensing Low Mass Boilers
Efficiency	★ Up To 95%	≤ 85%	< 85%	≤ 87%	★ ≥ 90%
Modulation	★ YES	NO	NO	NO	★ YES
Vent Category	★ IV	I	I	★ II or IV	★ IV
Required Vent Materials	★ 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
Controls	★ Modulating	On/Off	On/Off or Staged	On/Off or Staged	★ Modulating
Piping Setup	★ Single Loop	★ Single Loop	Primary/Secondary	★ Single Loop	Primary/Secondary
Built in Air/Dirt Separator	★ YES	NO	NO	NO	NO
Thermal Mass for System Stabilization	★ YES	★ YES	NO	★ YES	NO
Eligible for Federal Tax Credit	★ YES	NO	NO	NO	★ YES

**The Pioneer** 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 **The Pioneer** 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.

## PIONEER CENTRAL HEATING

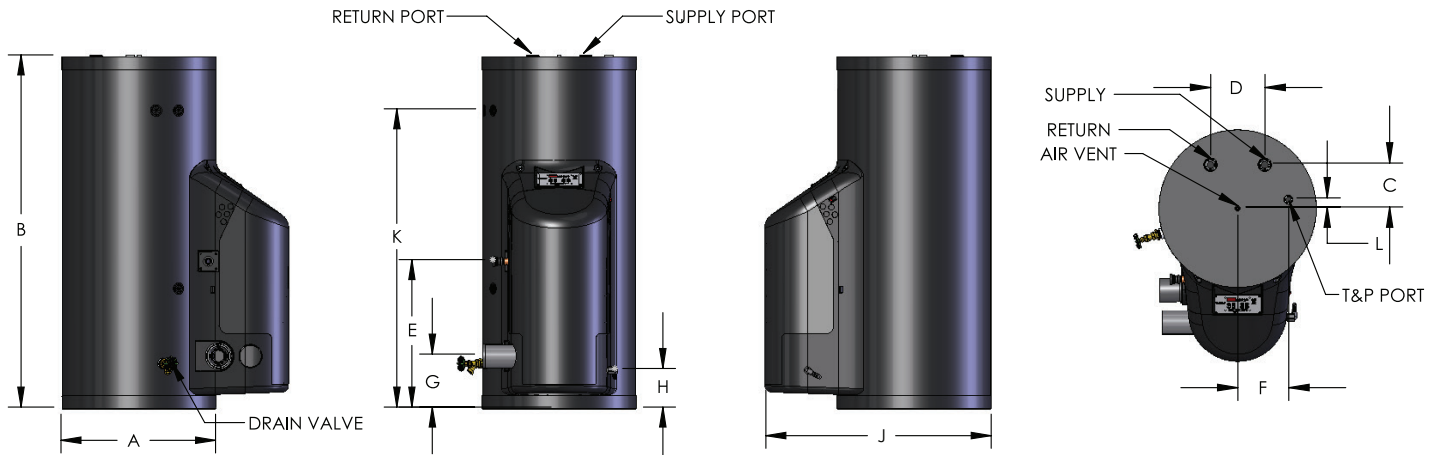


**Easy to Install**

**Retro-fit:** ideal for replacement systems, minimize the changes to piping; no primary secondary piping needed

**Simplified Retro Fitting for Cast Iron Boiler Replacements**  
**No Boiler Loop Required**  
**Direct Connection to the Primary Heating Loop**  
**Low Pressure Drop**  
**PVC Venting Material**

# Dimensions and Specifications



MODELS	A	B	C	D	E	F	G	H	J	K	L
PHR-100-55 PHR-130-55 PHR-160-55 PHR-199-55	23"	53"	6.5"	8"	22"	7.5"	8"	6"	34"	45"	1.25"

Model	PHR-100-55	PHR-130-55	PHR-160-55	PHR-199-55
<b>Installation</b>	Indoor, Floor Model, Fully Condensing			
<b>Thermal Efficiency</b>	95%	94%	95%	95%
<b>Input Rate (Btuh)</b>	35,000 ~ 100,000	35,000 ~ 130,000	40,000 ~ 160,000	40,000 ~ 199,000
<b>Flue System</b>	Sealed Combustion Direct Vent, Power Vent			
<b>Vent Run</b>	2"(85 ft), 3"(200ft) Vents in PVC - CPVC - SS - ULC S636 Flexible Polypropylene Vent Liner			
<b>Weight</b>	260 lbs.			
<b>Gas Supply Pressure</b>	Natural Gas	3.5"W.C ~ 14"W.C		
	Propane Gas	3.5"W.C ~ 14"W.C		
<b>Power Supply</b>	Main Supply	120V 60 Hz, 6A		
	Maximum Power	160W		
<b>Ignition System</b>	Spark Ignition - Dual Flame Monitoring - Flame Stabilization Monitoring			
<b>Burner System</b>	High-Grade Inconel Premix Burner			
<b>Gas System</b>	Fires on Natural or LP Gas with included Conversion Kit			
<b>Model Dimensions (W x H x D)</b>	W 23" x H 53" x D 34"			
<b>Heat Exchanger</b>	Copper Nickel Primary with 800 H and Copper Nickel Secondary Tube Construction			
<b>Water Pressure</b>	12 min - 30 max PSI			
<b>Connection Sizes</b>	Supply/Return	1 1/4" FNPT		
	Gas Inlet	3/4" NPT		
<b>Buffer Tank</b>	55 Gallon - 304L Stainless Steel			
<b>Warranty</b>	Limited 12 Year Residential Warranty			



## STANDARD FEATURES

- 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