



Advanced Heating
& Hot Water Systems

PIONEER

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



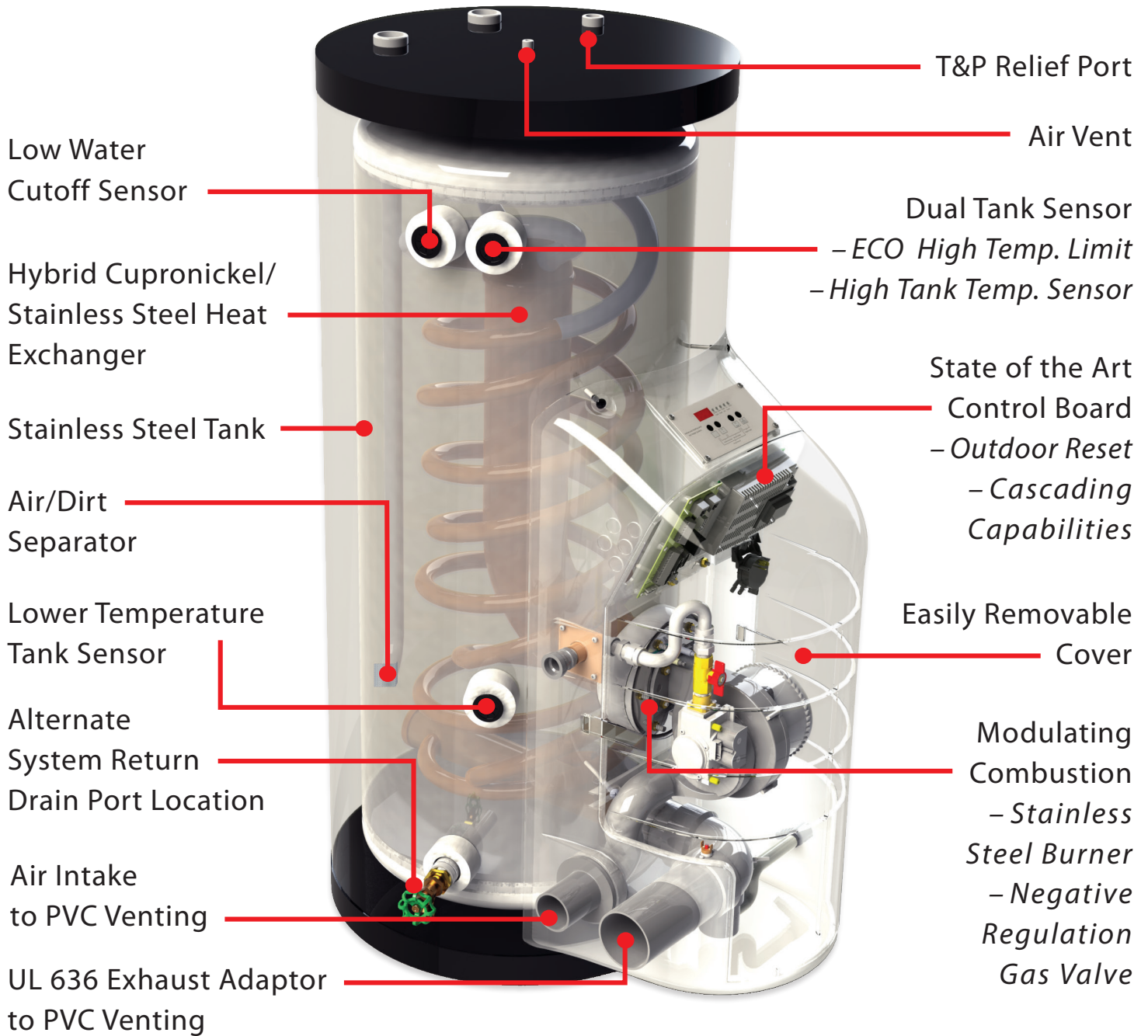
HIGH MASS

- 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

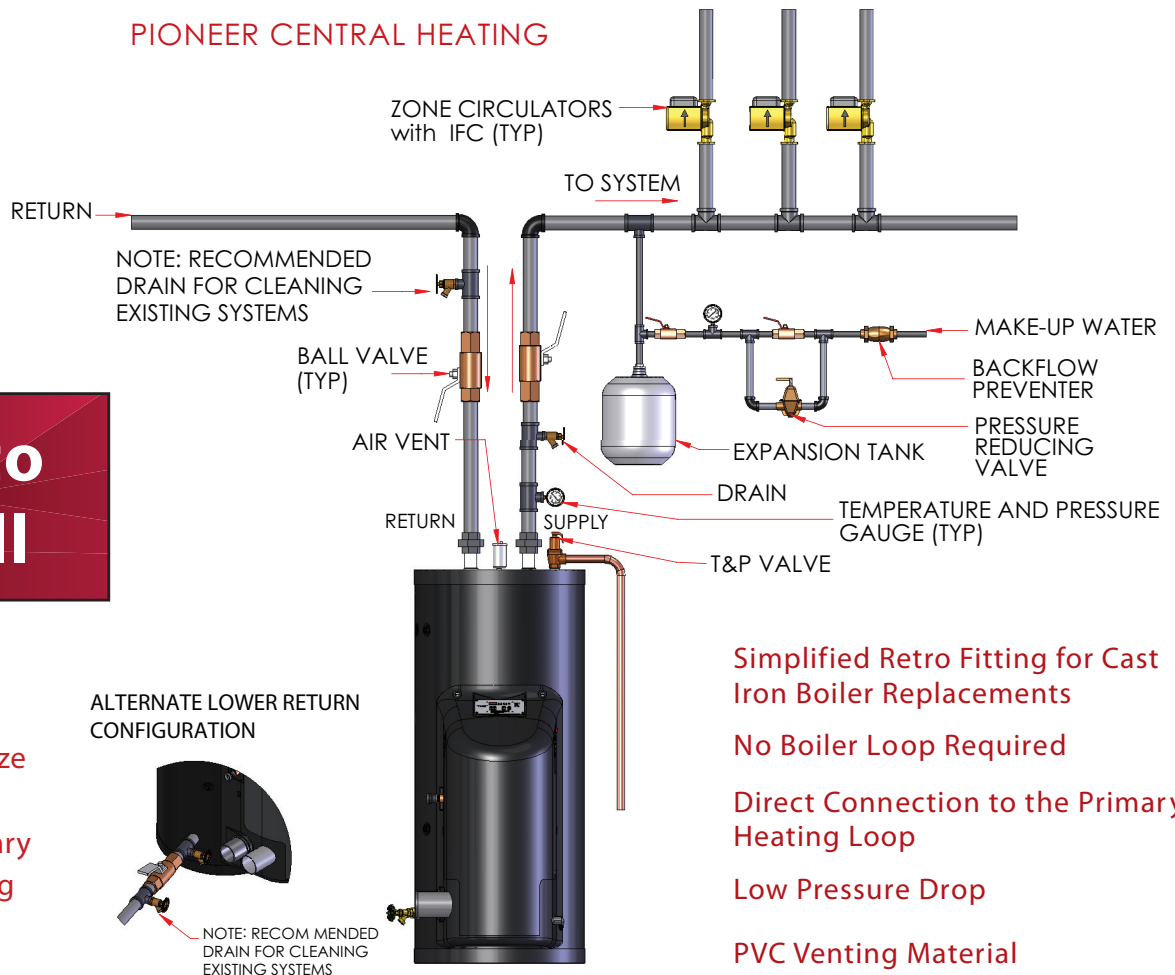
The Pioneer's Competitive Edge

	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

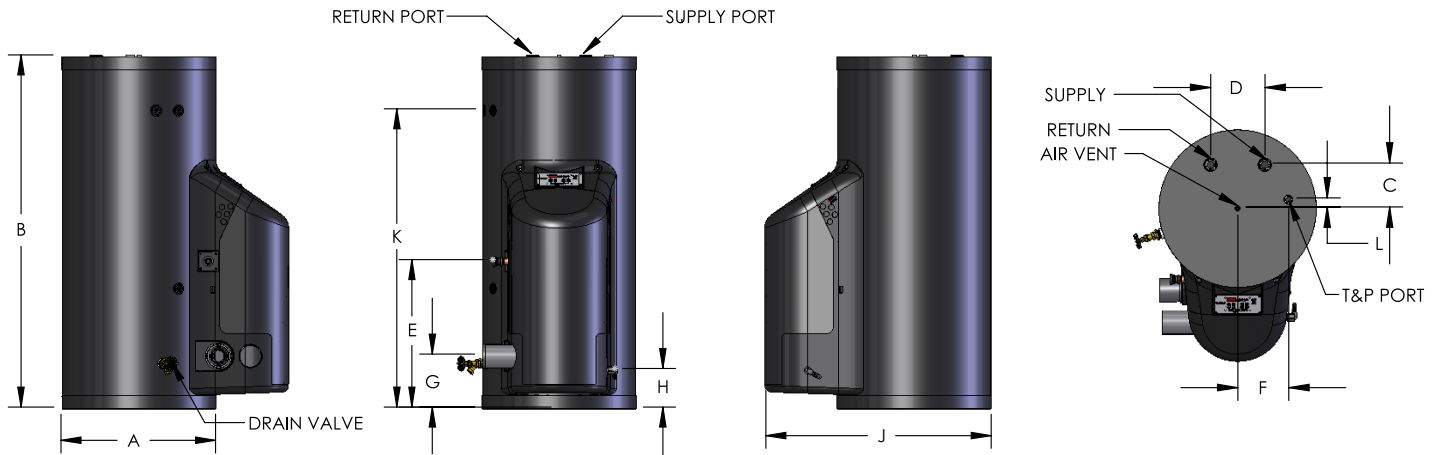


Easy to Install

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	23"	53"	6.5"	8"	22"	7.5"	8"	6"	34"	45"	1.25"
PHR-160-55											
PHR-199-55											

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