

Available for shipment  
August 2014

# CONQUEST™

## Condensing Water Heater

199,900 ▪ 250,000 ▪ 300,000 Btu/h  
15-year Corrosion Warranty



Conquest is a condensing, gas-fired water heater utilizing a completely submerged, single-pass, down-fired heat exchanger with dimpled and tapered fire tubes for enhanced heat transfer without the need for internal tube baffles or fins.

The entire water heater tank, combustion chamber and fire tubes are constructed from AquaPLEX® duplex stainless steel, which is naturally and completely immune to corrosion in potable water. The tank requires no lining, no sacrificial anode rods and no impressed current anode systems. After fabrication, the entire water heater vessel and heat exchanger are immersion pickle-passivated to create a pristine, non-corroding water side surface.

Combustion is provided by a pre-mix, stainless steel, ported surface burner. Coupled with a negative-pressure gas regulator, the Conquest burner automatically adjusts to changes in gas, combustion air and vent pressure to establish proper and complete combustion and easily meets low NOx requirements.

High efficiency is achieved with remarkably low pressure drop through the heat exchanger and allows for extended vent distances through low-cost PVC or polypropylene material.

Model Number	Btu/h Input	Btu/h Output	Thermal Efficiency	Gallons per Hour 100° ΔT	Gallons Storage	First Hour Delivery Gallons
20 L 100A-GCL	199,900	189,905	95%	228	100	298
25 L 100A-GCL	250,000	240,000		285		355
30 L 100A-GCL	300,000	285,000		342		412

Thermal efficiency, BTU output and recoveries are per DOE 10 CFR 430.

Electrical	120VAC, 5 amps	Emissions	< 20 ppm NOx
Minimum Gas Pressure	3.5" W.C. (natural gas)	Standby Heat Loss	< 900 Btu/h
Maximum Gas Pressure	14" W.C. (natural gas)	Thermostat Setting	90°F to 190°F
Vent Diameter	3"	Working Pressure	150 psi (ASME HLW)
Vent Material	PVC, CPVC, Polypropylene, listed stainless steel	Communications Protocol	Modbus RTU
Direct Vent Distance	3" @ 100 eq. feet	Weight (dry)	680 lbs.
		Weight (operating)	1520 lbs.



Engineered Water Heating Solutions®



# Conquest™ CONDENSING WATER HEATER

AquaPLEX® Storage Tank and Heat Exchanger (unlined duplex alloy) • 100 Gallon Tank

MODEL ▼	INPUT BTU	OUTPUT BTU ①	RECOVERY GPH ①		GAS CONNECTION NPT	VENT DIAMETER (5 elbows maximum)	OPERATING Weight (lbs)
			40°F to 120°F	40°F to 140°F			
20 L 100A-GCL	199,900	189,905	285	228	3/4	3" @ 100 eq. ft.	1520
25 L 100A-GCL	250,000	237,500	356	285			
30 L 100A-GCL	300,000	285,000	428	342			

① Output BTU and recovery efficiency based upon DOE 10 CFR 431.

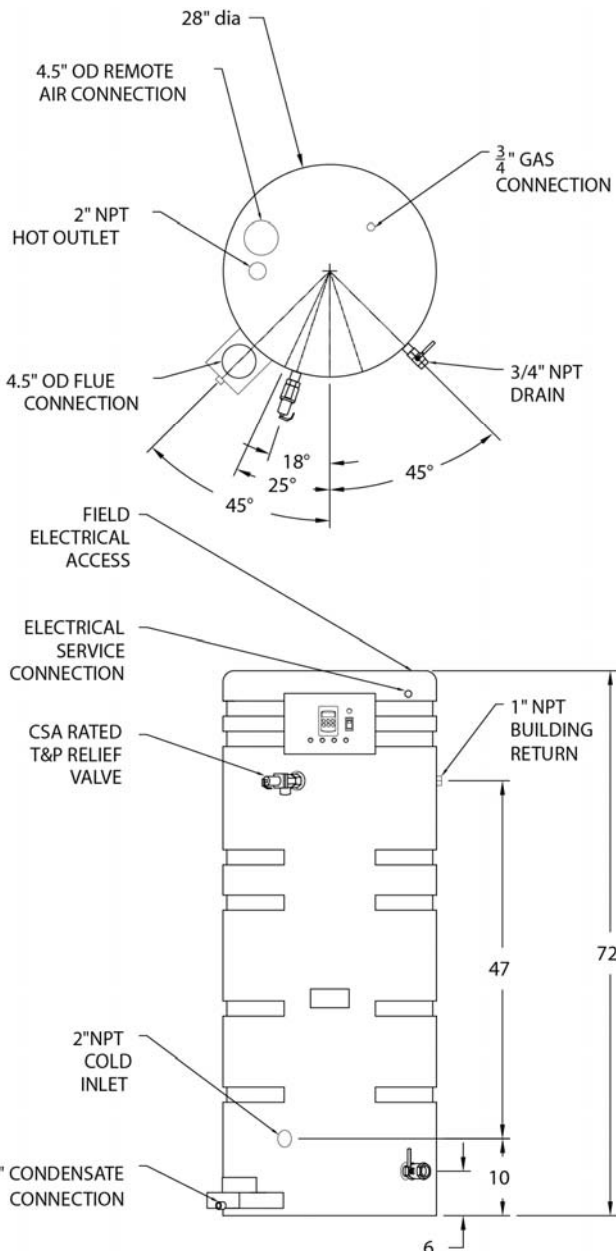
Dimensions are in inches unless otherwise indicated.

For standard and optional equipment, refer to form PV 8550.

Empty weight is 680 pounds and shipping weight is 880 pounds (all models)

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## Standard Electrical Service

120VAC, 1Ø, 60 Hz.  
All models 5 amps.

## Venting

Use a Category IV PVC, CPVC or ETL, UL, ULC or CSA listed stainless steel or Centrotherm InnoFlue SW Polypropylene vent, minimum vent length 5 eq. feet.

Do not size vent based only upon connection diameter at the appliance. Refer to installation manual for sizing requirements.

## Inlet Combustion Air

Up to 100 eq. ft. using 3" PVC or galvanized vent pipe.

Longer lengths are ETL listed through larger diameter pipe. Refer to installation manual.

## Gas Pressure - Natural

Minimum inlet flow pressure 3.5" W.C.  
Maximum static pressure 14" W.C.  
For LP gas, refer to installation manual.

## Minimum Clearance from Combustibles

Zero clearance from sides and rear, 24" from front, 15" from top. Can be installed directly on a combustible floor.

## Recommended Service Clearances

18" from all sides.

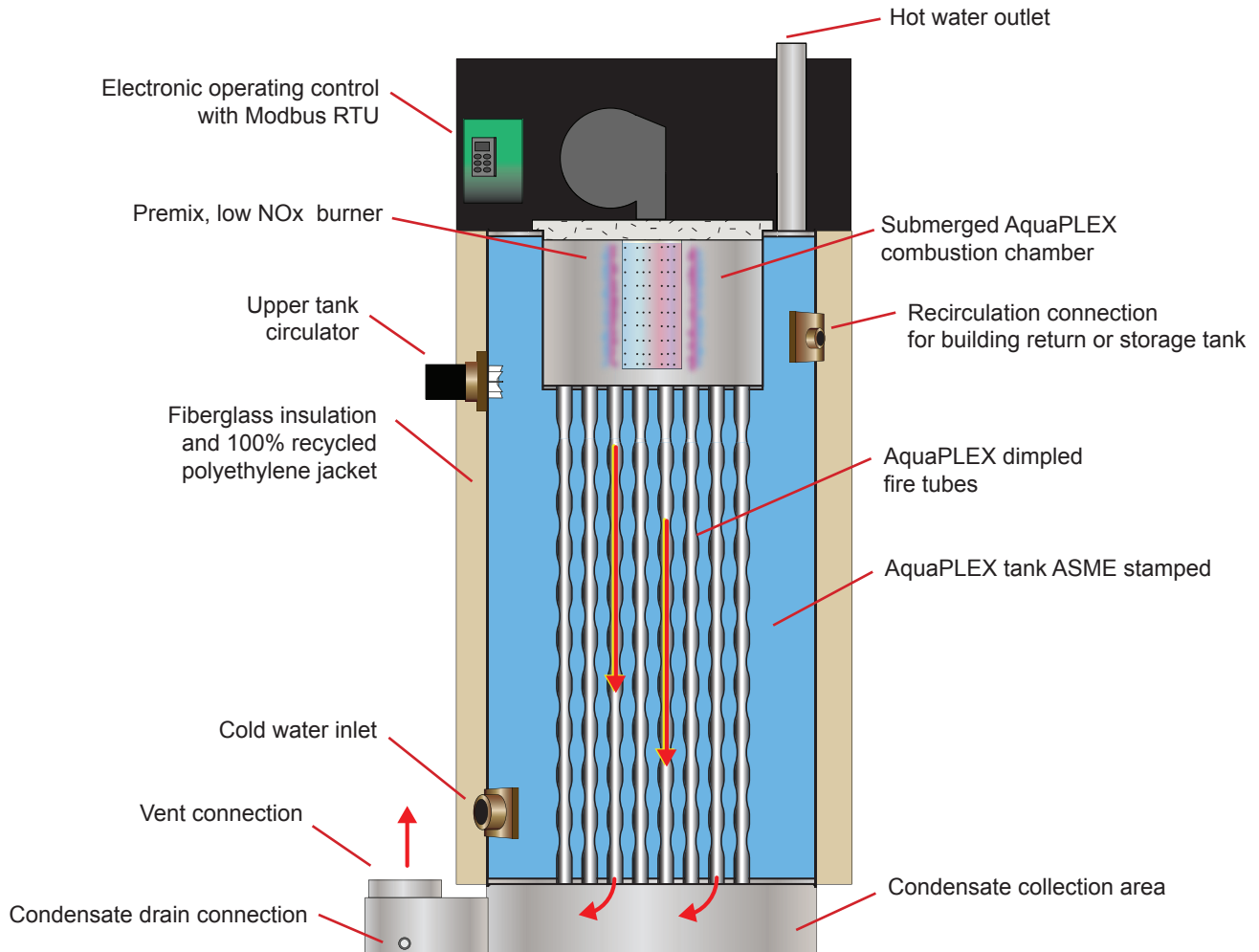
## Emissions

All models < 20 ppm NOx.



PVI Industries, LLC  
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# CONQUEST™



## Key performance features

**Nonferrous tank connections.** Lead-free bronze connections provide for a corrosion-proof tank fitting.

**Upper recirculation fitting.** Returns hot water to the top portion of the vessel. Preserves maximum thermal efficiency by avoiding the mixing of hot water with the cold water at the bottom of the tank.

**Upper tank circulator.** Promotes more effective heat transfer by increasing velocity and contact between the water and the heating surfaces. Also helps to prevent accumulation of scale.

**Tank insulated to ASHRAE 90.1 requirements.** Reduces heat loss to negligible levels. Annual cost of heat lost through the storage tank amounts to about \$60.

**ASME construction is standard.** Built to the rules of the American Society of Mechanical Engineers pressure vessel guidelines, Conquest boasts a superior tank construction compare to non-code water heaters.

