

# Power VT<sup>®</sup> Plus

Condensing Gas Fired Water Heater  
399 to 900 MBH



**96%**  
thermal efficiency  
at full rate

**Up to 99%**  
thermal efficiency with  
seamless VFD modulation

**AquaPLEX<sup>®</sup>**  
engineered duplex alloy  
tank and heat exchanger

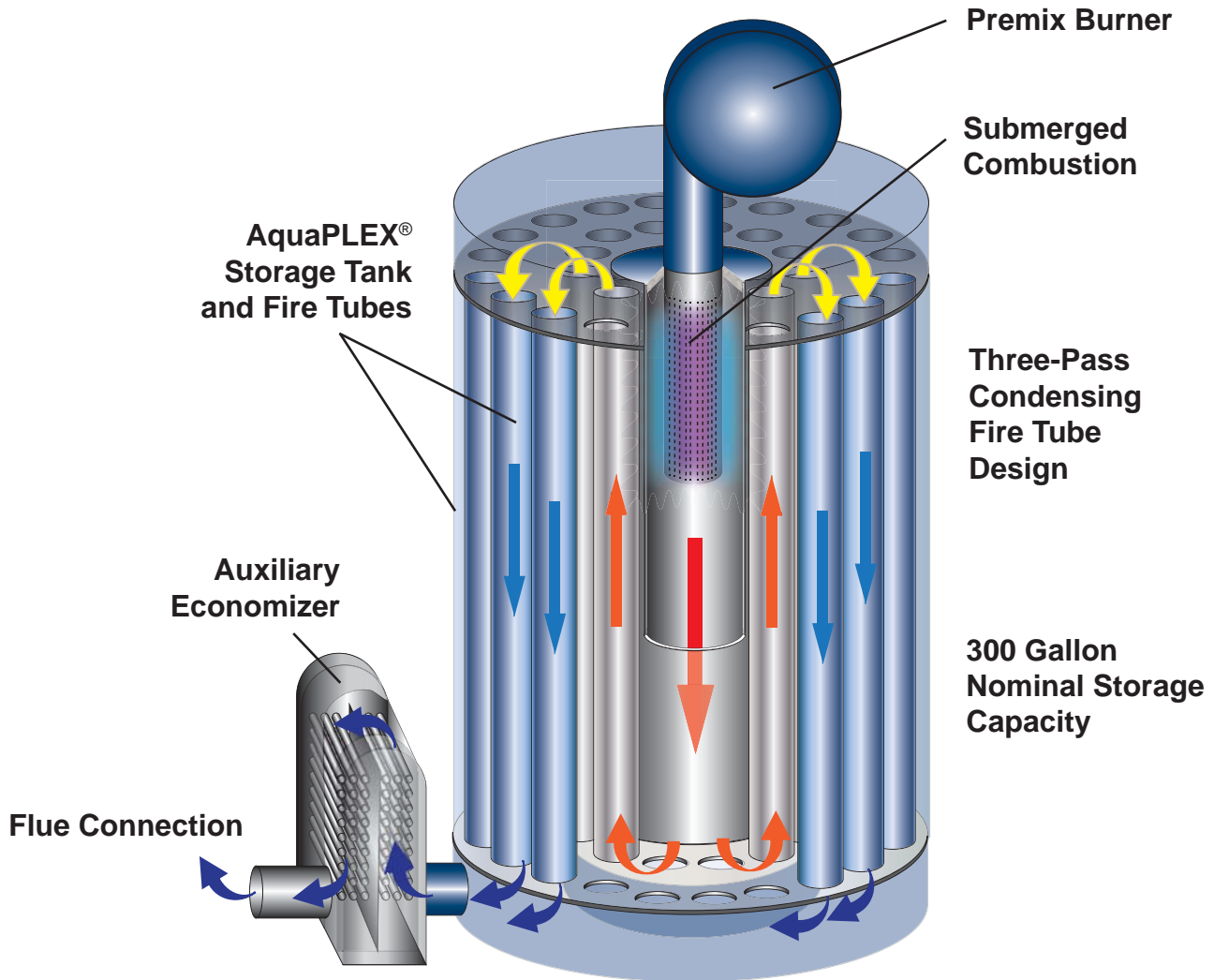
- No tank lining
- No anode rods
- Superior to 316L stainless
- Super strong material for lighter weight
- 15 year tank and heat exchanger warranty

Pre-mix, low NOx  
burner with  
proportional gas/air

Electronic operating  
control with Modbus  
communication

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*Up to 98% thermal efficiency at full firing rate from 40° to 140°F. Stack temperature is only a few degrees above ambient temperature. Efficiency improves to 99% at low fire.*

*All components that contact condensate are constructed of corrosion resistant materials.*

*AquaPLEX tank requires no anodic protection, whether sacrificial or induced current.*

*Low-temperature exhaust allows venting through low-cost plastic vent material.*

*All tank connections are non-ferrous and galvanically neutral to the AquaPLEX tank.*

*Draws inlet air through up to 100 equivalent feet while concurrently exhausting through 100 equivalent feet of 6-inch duct. Longer vent runs are possible through larger diameter material.*

*AquaPLEX tank is entirely robotically welded. Afterward, the tank is acid-cleaned and fully passivated in a process that involves complete submersion of the vessel.*

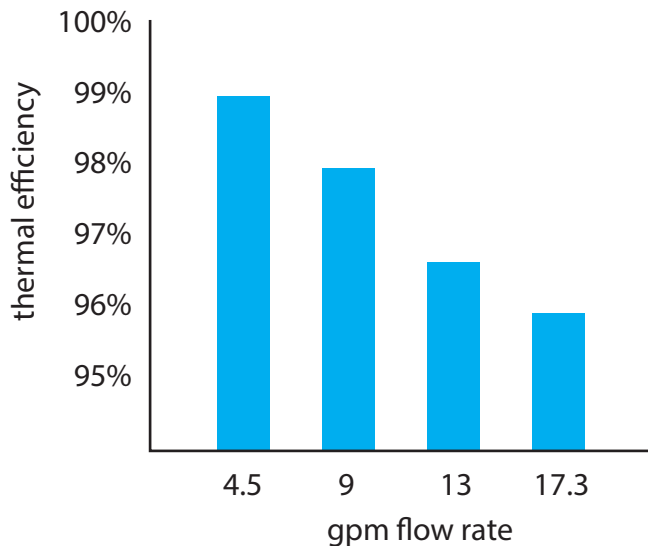
## AquaPLEX® construction for a "corrosion proof" water heater

The entire pressure vessel; shell, tube sheets and fire tubes, are fabricated from AquaPLEX, an unlined duplex alloy specifically engineered for potable water service with storage temperatures in excess of 200°F.\*

AquaPLEX combines the aqueous corrosion resistance of 316L stainless with the resistance to chloride corrosion seen in 400 series or ferritic stainless steels. This creates a water heater that is in every sense "corrosion proof" and results in unprecedented longevity in a water heater tank and heating surfaces.

## Modulation through variable blower speed

Power VT Plus is already extremely efficient at 96% at full rate, but to squeeze every last BTU out of the gas, the heater is equipped with modulation. As demand for hot water changes, the burner seamlessly modulates down through a VFD drive on the blower motor. The reduced rate allows the efficiency to climb to 99% during periods of low demand. The graph below shows the effect of modulation with 40°F entering and 140°F leaving water temperature in a 900 MBH Power VT Plus water heater at different flow rates.



## TempTrac® electronic operating control with Modbus RTU communication

Precise and programmable water heater operation is provided by an electronic temperature control with digital readouts of water temperature. The control offers a serial connection using Modbus RTU protocol for communication with a building automation system. This allows remote viewing of set point, probe temperatures, operating hours and alarm condition and also provides for remote nighttime setback of operating temperature if desired.



## Stainless steel burner with dual-fuel capability



Power VT Plus uses a stainless steel pre-mix surface burner enabling low NOx operation. A zero-governor gas valve provides for infinitely proportional mixing of gas and air, assuring proper combustion under all vent pressure conditions. A combination natural gas and LP gas train is available for backup fuel utilization.

\* maximum recommended storage temperature for general purpose potable water is 140°F.

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## Condensing Gas-Fired Water Heater

### Available models and performance data

Model	Btu Input	Btu Output	GPH 70° to 140°F ①	GPH 40° to 140°F ②
50 LX 300A-PVIF	500,000	480,000	823	588
75 LX 300A-PVIF	750,000	720,000	1235	882
90 LX 300A-PVIF	900,000	864,000	1482	1059

Parentetical information in model number indicates available tank series.

① Recovery based upon 96% thermal efficiency per DOE10 CFR 431(ANSI Z21.10.3 @ 70°F to 140°F.

② Recovery based upon 98% thermal efficiency with 40°F entering water temperature.

### Rough-in Heater Dimensions

Width	Depth	Height
45	71	94



### Selected Standard Equipment

- < 20 ppm NOx
- AquaPLEX<sup>®</sup> tank and fire tubes (unlined duplex alloy)
- ASME stamped and National Board Registered for 150 psi (section IV, part HLW)
- Nonferrous, removable fittings at all tank connections
- Hand hole tank cleanout
- Fiberglass insulation
- Steel jacket panels with industrial-grade finish
- Drain valve
- Secondary economizer for low temperature flue gas
- Intertek / ETL listed to safety standard UL795
- Intertek / ETL listed for use with CPVC vent material
- Intertek / ETL certified as low-lead compliant
- FM compliant
- ASHRAE 90.1 compliant
- Seamless VFD modulation with up to a 4-to-1 turndown
- Pre-mix surface burner with self-adjusting, proportionate gas/air
- UL compliant gas train; includes regulator, dual safety shutoff valves and dual manual shutoff valves
- Electronic flame safeguard with pre- and post-purge
- Combustion sequence panel lights including lockout
- Programmable electronic operating control with digital temperature readouts
- Immersion temperature limiting device
- ASME-rated temperature and pressure relief valve

- NEMA-1 control enclosure
- Terminals for remote on-off control
- Switched contacts for remote lockout notification
- 15-Year tank and heat exchanger warranty
- First-year cost-free service policy
- Factory authorized startup

### Selected Optional Equipment

- L.P. gas operation or dual fuel (natural and LP gas)
- GE-GAP (IRI) / CSD-1 code package
- Electronic low-water cutoff
- Manual-reset high limit
- CSA-rated temperature and pressure relief valve(s)
- Audible flame failure alarm with silencing switch
- Relay and proving terminals for remote combustion air louvers
- 485 serial cable to connect the electronic operating control to a Building Automation System (Modbus RTU)
- Alarm on any failure notification to BAS
- Protocol gateway for BacNet or Lonworks