



Advanced Heating
& Hot Water Systems

High Efficiency Hydra Smart Residential



Condensing Gas Tankless Water Heater

10 to 1 turndown ratio

Durable high grade stainless
steel heat exchanger

Endless hot water, advanced
temperature control

Advanced modulating
water heater with
up to **.96 UEF**

Available in
LP and natural gas

Eco-friendly and low
NOx combustion system

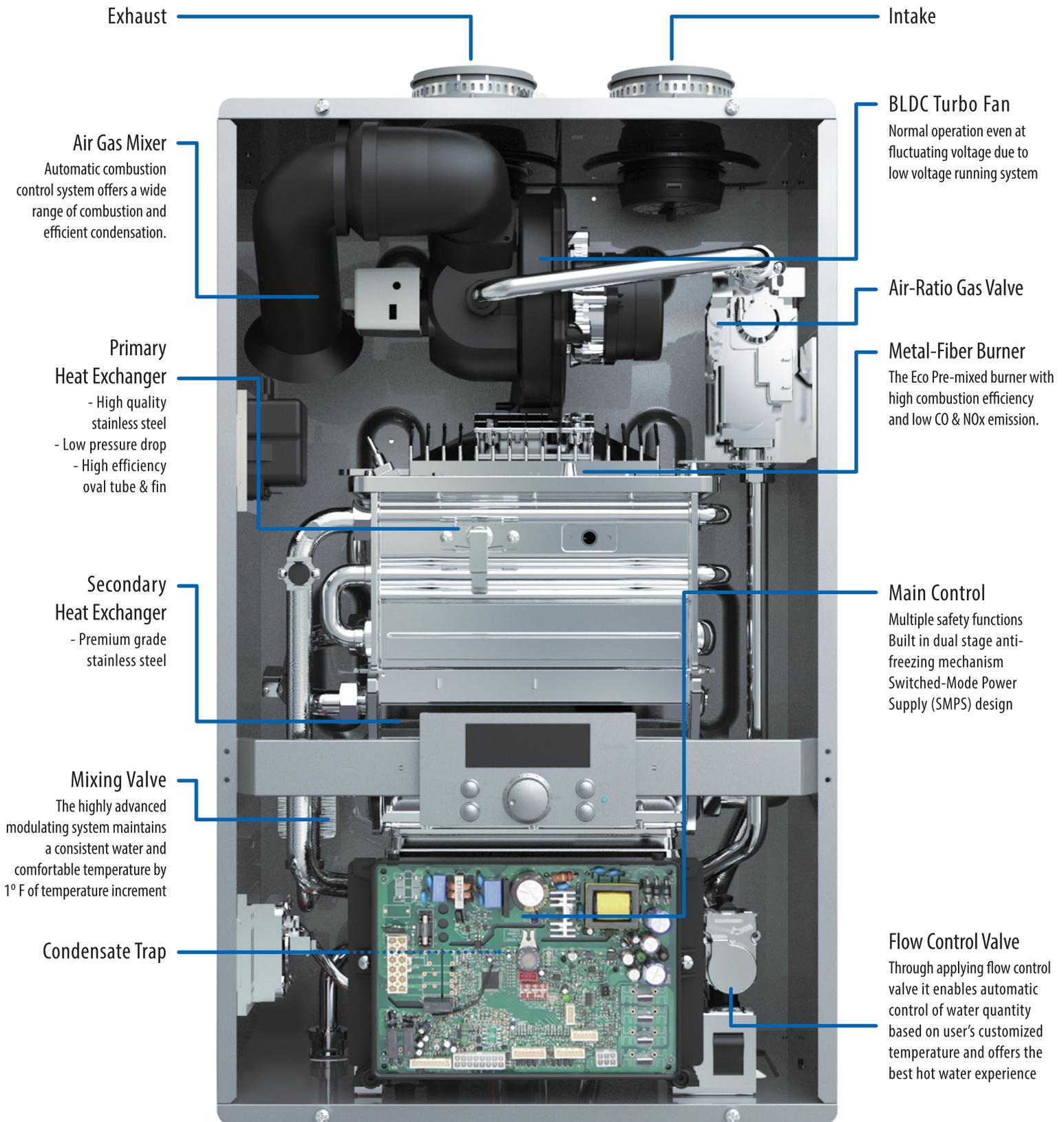


Outdoor Unit Available:
RTO-199



Hydra Smart

A CLOSER LOOK AT THE RT-199



Exhaust

Intake

BLDC Turbo Fan

Normal operation even at fluctuating voltage due to low voltage running system

Air-Ratio Gas Valve

Metal-Fiber Burner

The Eco Pre-mixed burner with high combustion efficiency and low CO & NOx emission.

Main Control

Multiple safety functions
Built in dual stage anti-freezing mechanism
Switched-Mode Power Supply (SMPS) design

Flow Control Valve

Through applying flow control valve it enables automatic control of water quantity based on user's customized temperature and offers the best hot water experience

Air Gas Mixer

Automatic combustion control system offers a wide range of combustion and efficient condensation.

Primary Heat Exchanger

- High quality stainless steel
- Low pressure drop
- High efficiency oval tube & fin

Secondary Heat Exchanger

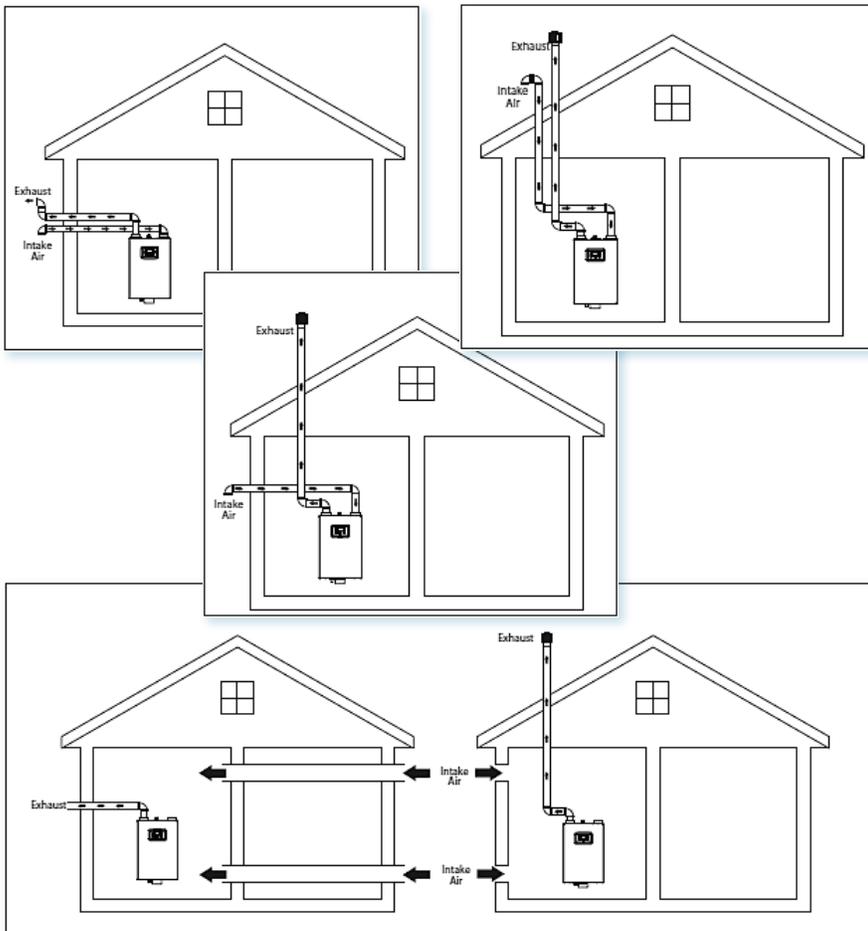
- Premium grade stainless steel

Mixing Valve

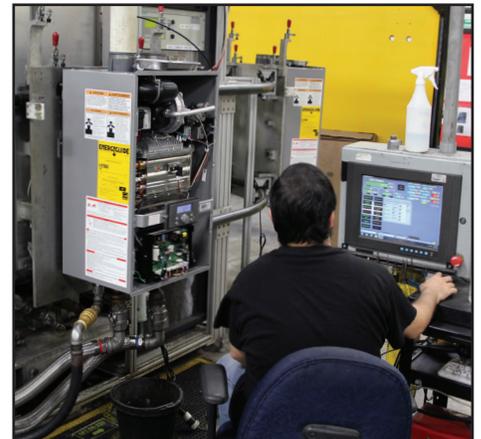
The highly advanced modulating system maintains a consistent water and comfortable temperature by 1° F of temperature increment

Condensate Trap

VENT TERMINATION



TESTING



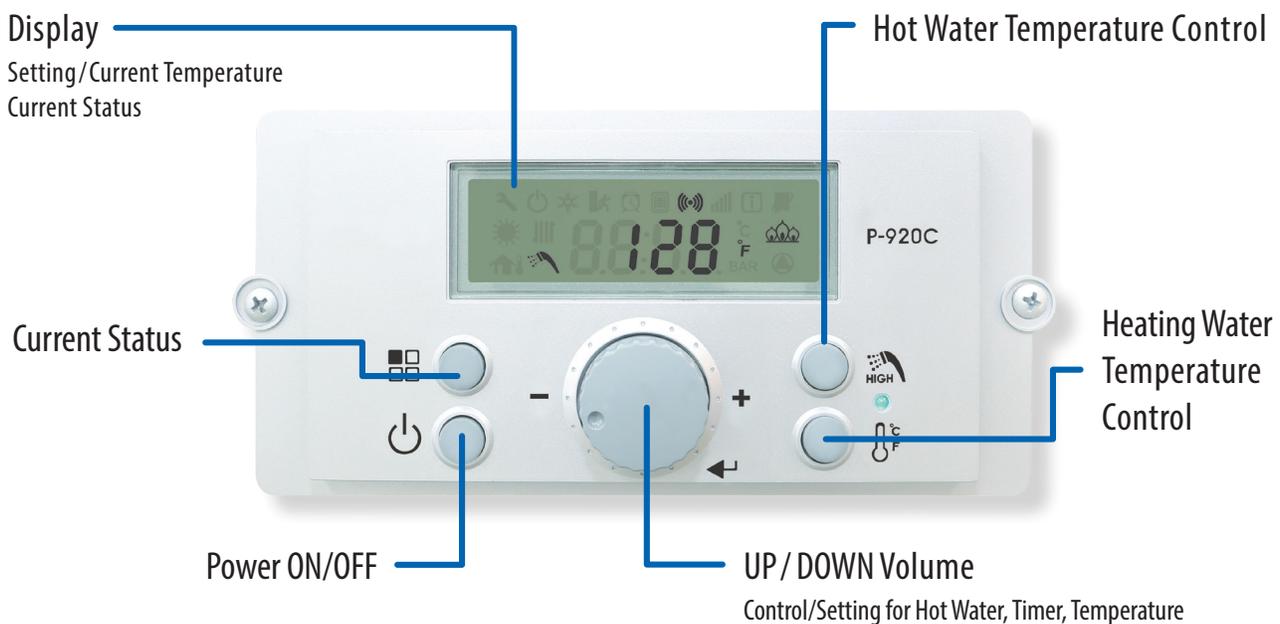
All Hydra Smart - RT Units are properly Tested and Assembled in Massachusetts to ensure that its quality is at the highest level



MULTIFUNCTION CONTROL PANEL

Customized Temperature Control

Advanced user friendly technology of FLOW CONTROL, FLOW SENSOR and HEAT CAPACITY CONTROL makes DHW even more comfortable by maintaining constant temperature during usage

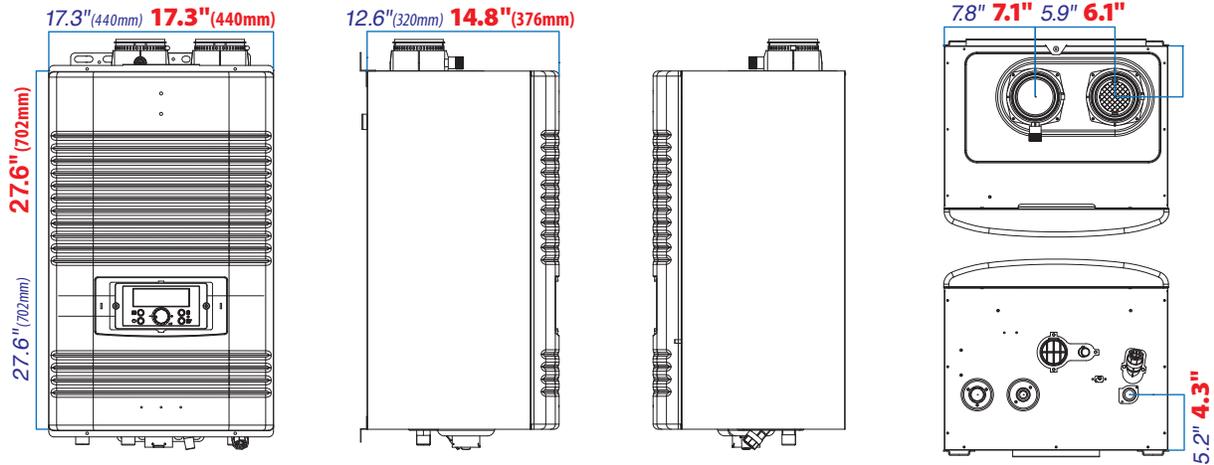


SPECIFICATIONS

12 Year Residential & 5 Year Commercial Limited Warranty

Dimensions for the RT-199 (Red)

Dimensions for the RT-150 (Blue)



*Must be ordered as LP units or Natural Gas units, NOT field convertible

| MODEL | | *RT-150 | *RT-199/RTO-199 (outdoor) |
|--|-------------------------------|---|-------------------------------|
| Gas Input Rate | Max | 150,000 Btuh | 199,000 Btuh |
| | Min | 15,000 Btuh | 19,900 Btuh |
| UEF (Uniform Energy Factor) / EF (Energy Factor) | | .93 UEF / .95 EF | .96 UEF / .98 EF |
| Recovery Efficiency | | 94% | 99% |
| Max GPM Rating Bin / Max GPM | | High / 4.5 | High / 5.9 |
| Hot Water Capacity | 35°F Rise | 8.1 Gal. Per Minute | 11.0 Gal. Per Minute |
| | 45°F Rise | 6.3 Gal. Per Minute | 8.5 Gal. Per Minute |
| | 77°F Rise | 3.7 Gal. Per Minute | 5.0 Gal. Per Minute |
| Installation | | (Indoor or Outdoor Units) Wall Hung, Fully Condensing | |
| Flue System | | Sealed Combustion Direct Vent, Power Vent | |
| Vent | | 2" (50 ft), 3" (100ft) Schedule 40 PVC, CPVC, PP | |
| Orifice Size | NG (Orifice/Needle) | .303" (7.7 mm) | .374" (9.5 mm) |
| | LP (Orifice/Needle) | Consult Factory | |
| Gas Supply Pressure | NG | 3.5" WC ~ 14" WC | |
| | LP | 3.5" WC ~ 14" WC | |
| Manifold Pressure | Min (3") | NG: -0.07" WC / LP: -0.07" WC | NG: -0.10" WC / LP: -0.05" WC |
| | Max (3") | NG: -0.366" WC / LP: -0.366" WC | NG: -0.11" WC / LP: -0.06" WC |
| Power Supply | Main Supply | 120V 60Hz | |
| | Max power Consumption | 125W | 135W |
| Ignition System | | Direct Electric Ignition / Automatic Flame Sensing | |
| Burner System | | Single Orifice Premixed Fuel Modulation Metal Fiber Infrared | |
| Gas Valve System | | Air Ratio Gas Valve | |
| Minimum Flow Rate | | 0.5 GPM | |
| Internal Pipe Material | | Stainless Steel | |
| Dimensions (W x H x D) | | 17.3" X 27.6" X 12.6" | 17.3" X 27.6" X 14.8" |
| Weight | | 64 lbs | 88 lbs |
| Heat Exchanger Water Capacity | | Under 2 Gallons | |
| Control Panel / Main Controller | | P-920C / NGTH-8000C | P-920C / GTH-9500C |
| Water Pressure | Max | 150 psi | |
| | Min | 15 psi | |
| Connection Sizes | (Cold/Hot) Water inlet/Outlet | 3/4" NPT | |
| | Gas Inlet | 3/4" NPT | |
| | Condensate | 1/2" NPT | |
| Materials | Cabinet | Cold Rolled Carbon Steel | |
| | Heat Exchanger | Primary Heat Exchanger: Stainless Steel Secondary Heat Exchanger: Stainless Steel | |
| Safety Devices | | Flame Rod, Burner Overheat Cut Off Device 302°F, Flue High Limit Switch 190°F, Water Temperature High Limit Switch 199°F, Freeze Protection Ceramic Heater (Turns on at 41°F, Turns off at 59°F), Water Leak Detect Sensor (RT-150) | |