

Commercial Grade Residential Tankless Gas Water Heaters

NON-CONDENSING CONCENTRIC VENT TANKLESS WITH X3 SCALE PREVENTION TECHNOLOGY

The fully modulating, gas fired, tankless water heaters offer sealed combustion and power vented flue supply making them ideal for residential hot water systems. Now equipped with X3 Technology™, these non-condensing units offer extended service life of up to three times longer than traditional models without X3 scale prevention technology.

FEATURES:

X3 SCALE PREVENTION TECHNOLOGY

- No annual descaling required
- No scale buildup means the heater maintains like-new performance longer
- Isolation valves not required
- Pressure relief valve included

CONCENTRIC VENT DESIGN

FIELD CONVERTIBLE FROM NATURAL GAS TO PROPANE

**COMPLIES WITH SCAQMD RULE 1146.2
AND OTHER AIR QUALITY MANAGEMENT
DISTRICTS WITH SIMILAR NO_x EMISSION
REQUIREMENTS OF 14 NG/J OR 20 PPM**

**COMPLIES WITH SJVACPD RULE 4308 FOR
LP NO_x EMISSION REQUIREMENTS OF 77
PPM**

MAXIMUM FLOW RATES UP TO 10.0 GPM

COPPER HEAT EXCHANGER

- 25x better heat transfer than stainless steel thus stabilizing outgoing water temperature quicker and reducing pressure drop across the heat exchanger

INDOOR MODELS ONLY

COMPLIES WITH LEAD FREE STANDARDS

RECIRC CAPABLE

- Approved to work with an external recirculation pump and crossover valve

SAFETY FEATURES:

- Built-in Freeze Protection
- Manual Reset Hi-Limit (Up to 194°F)
- Overheat Cutoff Fuse
- Inlet and Outlet Thermistors for Constant Temperature Monitoring
- Air Fuel Ratio Rod
- Flame Sensor

VENTING AND COMBUSTION

- Direct vent APNC35 concentric vent system
- Vertical or Horizontal Vent Termination Installation
- 43' Max Length, 4 Elbows max (87° elbows = 5' equivalent length)
- Power Direct Vent
- Electronic Ignition - No Pilot Light

OPTIONAL ACCESSORIES

- Isolation Valve Kit
- Remote Control
- X3 Freeze Protection Kit

WARRANTY

- 15-year limited warranty on heat exchanger in residential applications
- 1-year limited warranty on heat exchanger in commercial applications
- 5-years Residential parts
- 1-year Commercial parts
- 1-year labor coverage for warranty repairs

X3 TECHNOLOGY

INDOOR MODELS

LTI-310CX3, LTI-510CX3



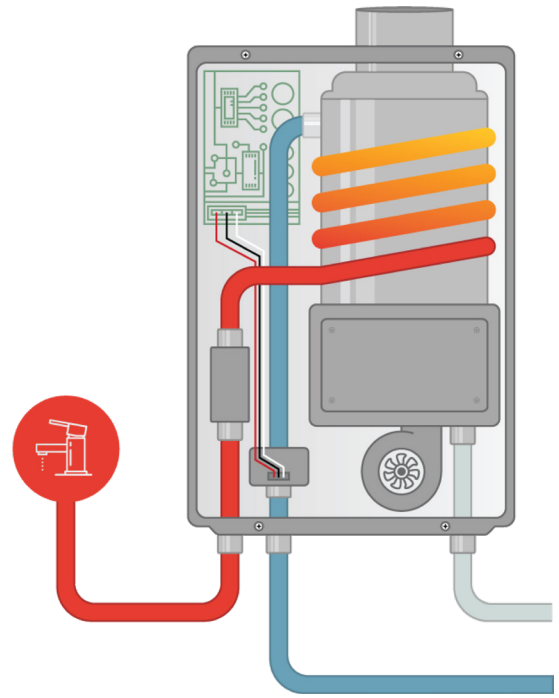
Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

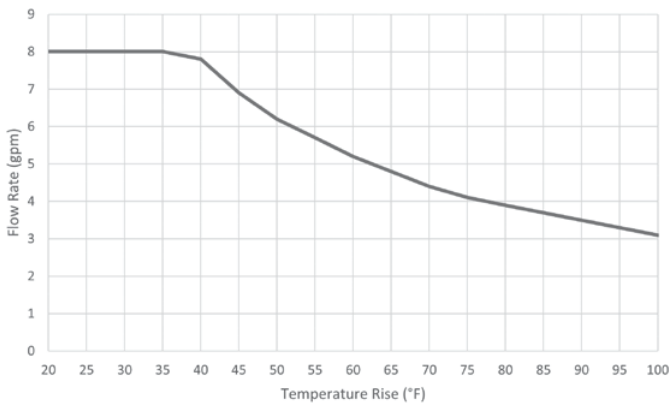
HOW IT WORKS

Lochinvar's gas tankless water heaters with X3® Scale Prevention Technology are attached directly to the water line. When you open a hot water tap, the burner in your tankless water heater activates. As water flows through the unit, it quickly reaches the present temperature by rapidly absorbing heat from both heat exchangers. Our patent pending X3 Scale Prevention Technology allows mineral particles to pass through harmlessly while also continually protecting the heat exchanger from scale buildup. This eliminates the need for regular descaling and extends the unit's life up to three times vs. a tankless model without X3 Scale Prevention Technology.

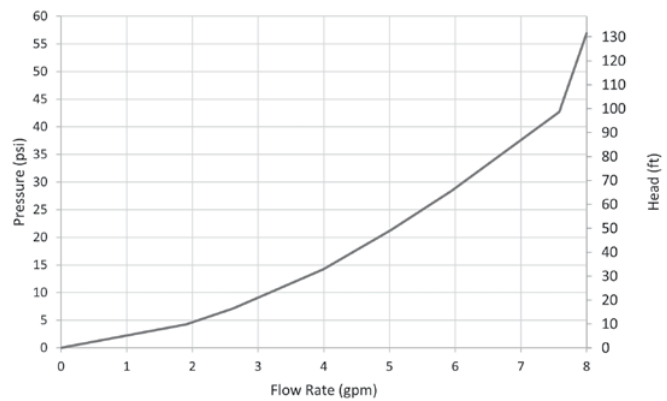
Due to the direct heat exchanger these gas tankless water heaters provide long-lasting, on demand hot water. When the water tap is turned off, the unit shuts down to conserve energy.



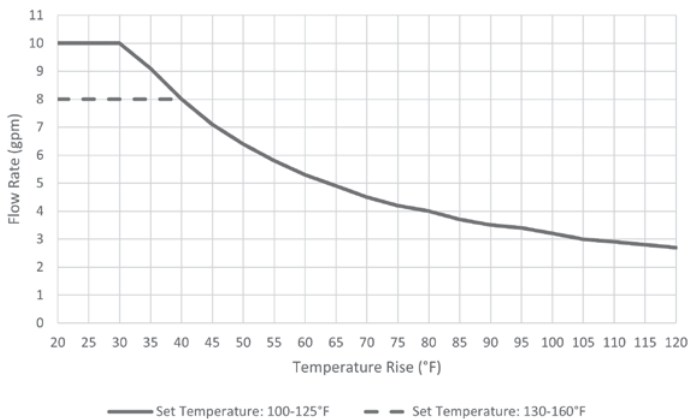
310CX3 OUTPUT TEMP VS. GPM



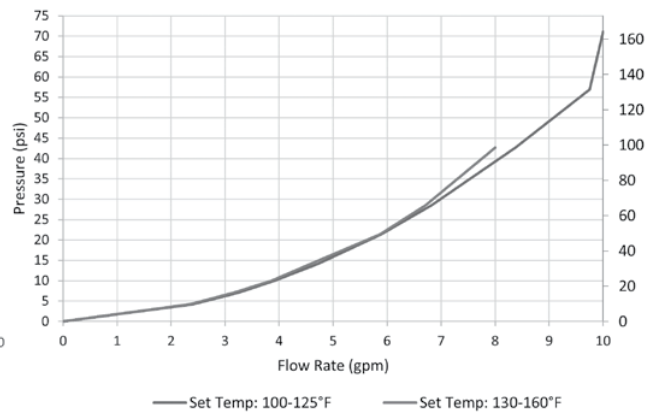
310CX3 PRESSURE LOSS



510CX3 OUTPUT TEMP VS. GPM



510CX3 PRESSURE LOSS

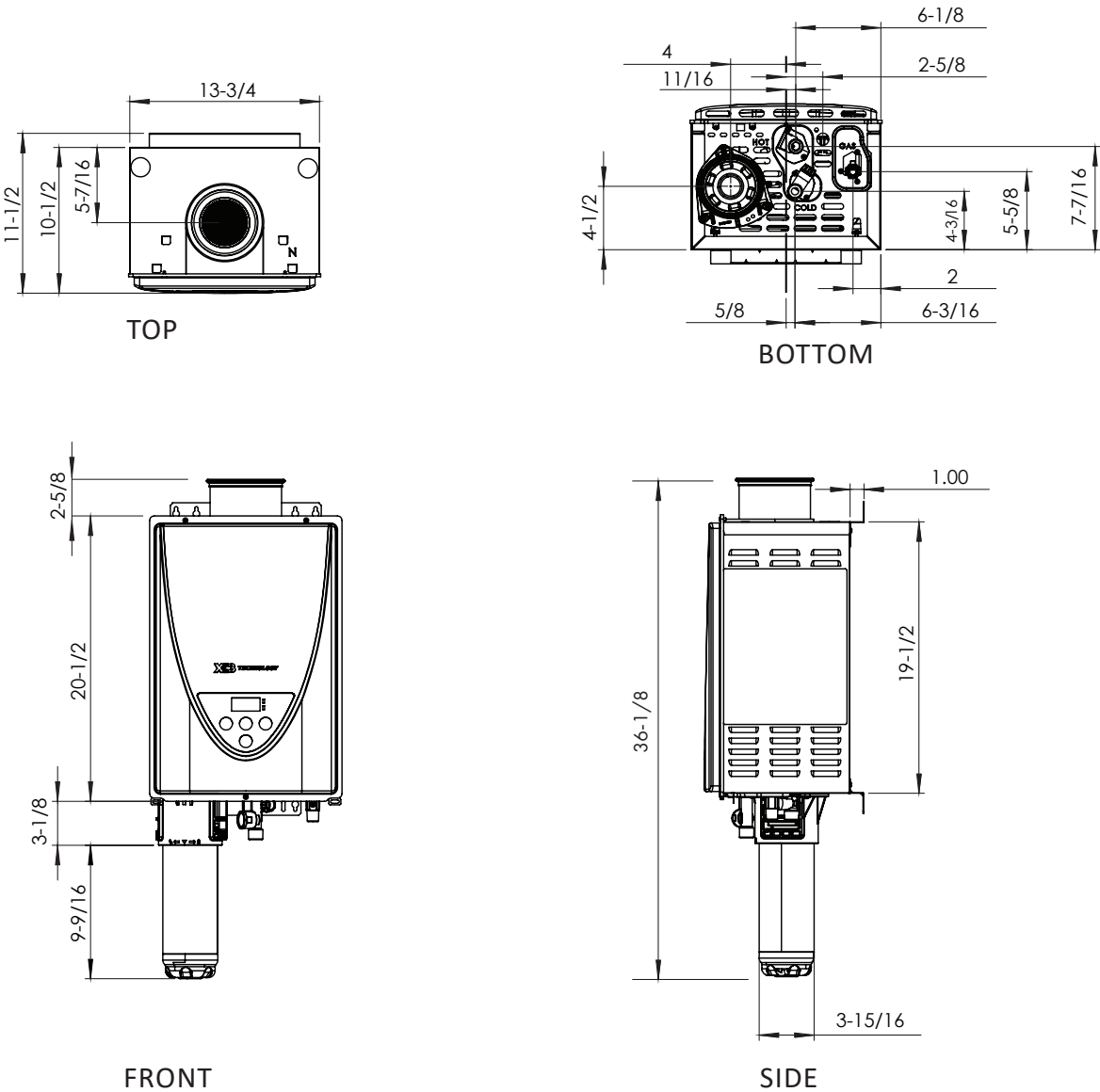


Tankless Residential Water Heater Series

NON-CONDENSING CONCENTRIC VENT TANKLESS X3 HIGH EFFICIENCY WATER HEATERS

Model Number	Type	Gas Consumption Input		Inlet Gas Pressure		Energy Factor (EF)	Maximum GPM*	Hot/Cold Connections	Gas Connection	Dimensions in Inches				Unit Weight (lbs)
		Minimum BTU/H	Maximum BTU/H	Minimum in. W.C.	Maximum in. W.C.					Height	Width	Depth	Height with Cartridge	
Indoor Models														
LTI-310CX3	Natural	15,000	190,000	4.0	10.5	0.81	8	3/4" NPT	3/4" NPT	20-1/2"	13-3/4"	11-1/2"	36-1/8"	51
LTI-510CX3	Natural	15,000	199,000	4.0	10.5	0.81	10	3/4" NPT	3/4" NPT	20-1/2"	13-3/4"	11-1/2"	36-1/8"	51

15-150 psi water pressure. 40 psi or above recommended for maximum flow.
*Field gas convertible from natural gas to propane. Conversion kit is included with the heater.
**For Propane, minimum inlet gas pressure is 8.0 in. W.C. and maximum inlet gas pressure is 14.0 in. W.C.
***Current numbers based on factory testing; 0.5 GPM required for activation; 0.4 GPM required for continuous fire after initial ignition.
Suitable for commercial applications.
Certified from sea level to 10,100 ft. elevations.



SUGGESTED SPECIFICATIONS FOR THE LTI-510CX3

The fully modulating, on-demand, non-condensing gas fired tankless water heater shall be Lochinvar Water Heater, having a maximum input rating of 199,000 Btu/h and available in natural gas (NG). For use with propane (LP) gas, the heater shall be field converted using the factory supplied conversion kit. The conversion kit shall be supplied with the heater. The heater shall have ¾ in. male NPT water and gas connections. The inlet gas supply pressures shall be 4.0 in. WC (min.) up to 10.5 in. WC (max.) for NG and 8.0 in. WC (min.) up to 14 in. WC (max.) for LP. The heater shall incorporate an integrated temperature controller that will provide diagnostic information, fault history, and heater set temperature. The heater shall operate using 120 V / 60 Hz power source. The heater will incorporate a factory installed power cord.

The indoor heater shall be vented with a 3"/5" direct vent APNC35 concentric vent with a length not to exceed 43 ft. (equivalent), terminating horizontally or vertically with no more than four 87° elbows.

The water heater shall use a commercial grade copper alloy, fin tube heat exchanger with quick release brass or bronze waterways. The heater shall be controlled by an on-board solid-state printed circuit board which uses the following factory installed components: thermistors to monitor water temperature; a flow sensor to measure flow rate; a flame sensor to monitor combustion; and an air-fuel ratio rod to measure and adjust air input in order to maintain optimal combustion efficiency. The heater also consists of in-line fusing and surge absorbers for electrical surge protection, an electronic spark igniter, aluminized stainless steel burners, hi-limit switch to monitor water temperature, modulating gas valve, overheat cutoff fuse, and dual freeze protection that incorporates heating blocks and the ability to automatically fire the heater to protect the heat exchanger.

The heater models are design certified by CSA according to CSA/ANSI Z21.10.3 • CSA 4.3, approved for sale in the United States, meets the energy efficiency requirements of the U. S. Department of Energy and ASHRAE 90.1, complies with SCAQMD Rule 1146.2 and other air quality districts with similar requirements for low NOx emissions of 14 ng/J or 20 ppm. Compliance also includes SJVACPD Rule 4308 for LP NOx emission requirements of 77 PPM.



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