

MASCOT ST

Wall Hung Condensing Tankless Water Heater

0.96 Energy Factor

10:1 Modulation

Environmentally
Friendly Low NOx Emissions

Reliable Stainless Steel
Condensing Heat Exchanger

Vent up to 100 ft. in PVC,
CPVC & Polypropylene

Natural Gas & Propane Models



LAARS[®]
Heating Systems Company
A subsidiary of **BRADFORD WHITE**[®] Corporation

High Efficiency Condensing Tankless Water Heater

The Mascot ST is a wall-mounted condensing tankless water heater packed with features that easily satisfies the hot water needs of the modern home.

Powering the Mascot ST is an advanced stainless steel condensing heat exchanger using the latest in combustion technology. Our heat transfer tubes are constructed with a corrosion-resistant stainless steel and are precisely aligned to maximize heat transfer. This combination results in a system that delivers a quick heating response, exceptional efficiency, and years of reliable service.



Advanced Straightforward Controls

Every Mascot ST is equipped with the advanced Laars Integrated Control System

- ▶ Easy-to-use dial and push button input system with large backlit display



- ▶ Functions are clearly displayed for quick setup and diagnostics
- ▶ Quick access buttons for temperature control and status functions

Saves You Money

Greatly reduce heating bills when compared to older, low-efficient water heaters! A 0.96 energy factor equals lower fuel use. In conventional tankless water heater designs the heat trapped in the flue gas goes up the chimney instead of heating your water.



Our technology releases the heat stored inside the exiting flue gas to reach ultra-high efficiencies. Potentially save thousands of dollars in water heating bills over the life of this condensing tankless water heater!

- ▶ When the flue gas contacts the Mascot ST stainless steel heat exchanger it begins to condense, releasing stored heat
- ▶ The heat released by condensing is combined with the heat from the burner flame
- ▶ The result is the majority of the available heat is transferred to your home—up to 30% more energy versus older low-efficient designs—saving you money

- ▶ Rebate Eligible—check federal, state, and local rebates for upfront savings!

Enough Hot Water for Everyone

The compact Laars Mascot ST uses a reliable, stainless steel condensing heat exchanger that offers the best in tankless water heating.

When there is a need for hot water the Mascot ST heat exchanger lights and begins to produce hot water for your faucet, shower, etc.



The condensing heat exchanger will efficiently run for as long as you need it, making sure you never run out of hot water. A very efficient and responsive system that gives you the best of both worlds! Hot water fast and an endless supply – never run out again.

Reliable & Innovative Design

High Performance Blower

Blower designed specifically for use with the Laars Mascot ST heat exchanger.

Performance curve matches required heat exchanger air flow resulting in ideal air to fuel ratio.

Automatic Air Gas Mixer

Combustion control system spans a wide range of efficient and reliable combustion rates.

Advanced Condensing Heat Exchanger

Stainless steel water tube construction results in superior performance at an industry leading 0.96 energy factor while minimizing calcium deposits for long life.

Mixing Valve

Precision mixing of domestic hot water ensures that the ideal water temperature is delivered throughout your home each and every time.

Modulating Gas Valve

Clean Burning Burner

Pre-mix metal fiber burner uses fuel efficiently and produces ultra-low NOx and CO emissions.

Control Display

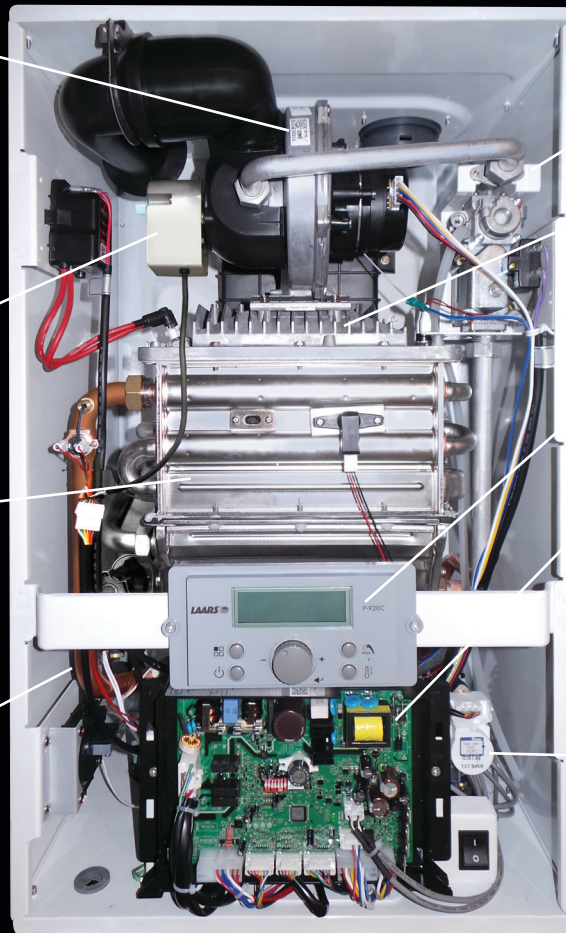
Easy-to-use push button and dial interface.

Laars Integrated Control

- Dual stage anti-freezing mechanism
- Switched-Mode Power Supply (SMPS) design
- Built-in gas leak detection (alarm will activate and the unit will shut down if a leak is detected)

Flow Control Valve

Consistent supply of ample hot water is delivered through this advanced modulating flow system.



Laars Mascot ST Heat Exchanger Advantage:

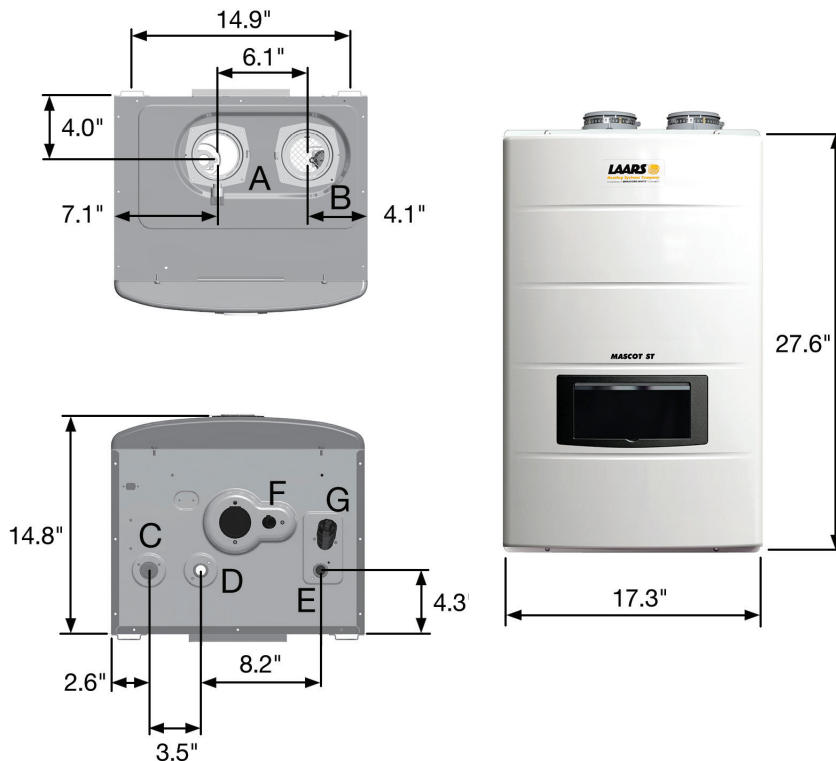
- ▶ Hot flue gas is evenly distributed across an array of oval water tubes
- ▶ The oval tube shape causes turbulent flow and releases stored heat trapped inside the hot flue gases to better transfer heat from the water heater to your home
- ▶ Self-cleaning, condensate flows down along the tube walls and out through condensate collection system
- ▶ Uniform heat distribution reduces stress points in the heat exchanger. Combined with erosion- and corrosion-resistant materials, the result is a durable design for a long lifetime of use



**Advanced Water Tube
Heat Exchanger Technology**

MASCOT ST Specifications

SPECIFICATION	UNITS / CONDITION	MSTWW199
Energy Factor (Efficiency)	-	0.96
Turndown	-	10:1
Fuel	-	Natural Gas or Propane
Input, Max Fire	MBH (kW)	199 (58)
Output, Max Fire	MBH (kW)	193 (56)
DHW Flow Rate	35°F Temp Rise - GPM (l/m)	11 (42)
	45°F Temp Rise - GPM (l/m)	8.5 (32)
	77°F Temp Rise - GPM (l/m)	5.0 (19)
Minimum Flow Rate	GPM (l/m)	0.5 (1.9)
Water Pressure	psi (kPa)	15 - 150 (103 - 1034)
Pressure Relief Settings	psi (kPa)	150 (1034)
Gas Supply Pressure	NG(In WC)	5.5" to 10.5"
	LP(In WC)	9.5" to 13.0"
Vent Diameter / Eq Length	inches / ft	2 / 15
		3 / 100
Vent Material	-	PVC, CPVC, Polypropylene
Power Supply	Volts / Hertz	120 / 60
Max Power Load	Watts	135
Weight Unit	lbs. (kg)	88 (40)
Weight Shipping	lbs. (kg)	100 (45)
Dimension (W x H x D)	inches	17.3 x 27.6 x 14.8
Warranty	-	Limited 12 Year Residential Warranty



Item	Description	Diameter
A	Exhaust Outlet Pipe Collar	3"
B	Air Intake Collar	3"
C	Gas Inlet Connection (NPT)	3/4"
D	DHW Outlet (NPT)	3/4"
E	DHW Inlet (NPT)	3/4"
F	Condensate Line (NPT)	1/2"
G	Cold Water Inlet Filter	—

Laars Heating Systems Company reserves the right to change specifications, components, features, or to discontinue products without notice.



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