

F I R E T U B E T E C H N O L O G Y

# MASCOT FT

Wall Hung Combination Boiler & Water Heater  
or Space Heating Boiler



95% Efficient (AFUE)

Up to 10:1 Modulation

Environmentally Friendly  
Low NOx Emissions

Integrated Indirect Tank  
for Superior DHW  
Performance

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

Natural Gas &  
Propane Models

**LAARS**<sup>®</sup>  
Heating Systems Company  
A subsidiary of **BRADFORD WHITE**<sup>®</sup> Corporation

# High Efficiency Fire Tube Combi Boiler



The Mascot FT is a combination ("Combi" - heating and domestic hot water) or heating-only wall mounted boiler packed with features. It easily satisfies the space heating and hot water needs of the modern home.

Powering the Mascot FT is an advanced fire tube heat exchanger that uses the latest in heating tube technology. Our heat transfer tubes are constructed with an inner finned aluminum core and an outer corrosion-resistant stainless steel sleeve. This combination results in a system that delivers quick heating response, exceptional efficiency, and years of reliable service.

## Advanced Straightforward Controls

Every Mascot FT 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 set-up and diagnostics
- ▶ Quick access buttons for temperature control and boiler status functions
- ▶ Outdoor reset feature for fuel savings



## Enough Hot Water for Everyone

The Laars Mascot FT combi models use a "hybrid water heater design" that combines the best of tankless water heating and tank type water heating into one compact system.

A half gallon mini-indirect tank is kept charged with hot water, always on standby to ensure that you have hot water available as fast as possible.



## Saves You Money

Greatly reduces heating bills when compared to older, low-efficient boilers-up to 20% lower! Potentially saves thousands of dollars in heating bills over the life of the boiler.

- ▶ Up to 95% efficiency (AFUE) equals lower fuel use
- ▶ Outdoor reset technology balances your home's heating needs with the outside temperature
- ▶ Mascot FT modulates to a lower firing rate during cool days to reduce fuel use even further
- ▶ Maximum Rebate Eligible – check federal, state, and local rebates for upfront savings!



When the half gallon of hot water begins to be used by your faucet, shower, etc., the boiler fires and immediately begins to produce more hot water.

The half gallon mini-indirect tank makes sure you have hot water quickly and the boiler makes sure you never run out of hot water for as long as you need it!

The best of both worlds! Hot water fast and an endless supply – never run out again.

# Reliable & Innovative Design

**Automatic Air Elimination Valve**

**Modulating Gas Valve**

Easily convertible from natural gas to propane

**Integrated Domestic Hot Water Indirect Tank (Combi Models Only)**

Domestic hot water available at all times for quick response.

- Reliable mini-indirect tank design
- Premium grade stainless steel
- Plentiful domestic hot water flow rates

**Laars Integrated Control**

- Outdoor Reset
- Dual stage anti-freezing mechanism
- Conformal coating encapsulates control board protecting it from moisture
- Built-in gas leak detection (alarm will activate and the unit will shut down if a leak is detected)

**Boiler Pump**

**High Performance Blower**

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

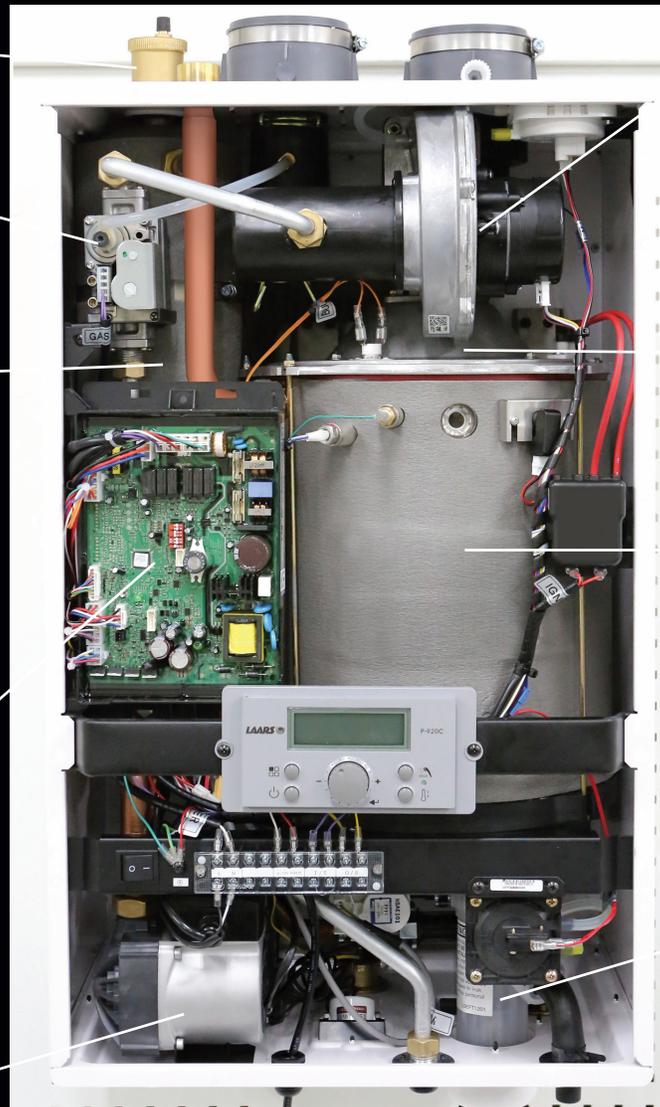
**Clean Burning Burner**

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

**Advanced Fire Tube Heat Exchanger**

Stainless steel with aluminum core transfer tube heat exchanger offers superior performance and 95% efficiency at low pressure drops.

**Condensate Trap**



## Laars Mascot FT Heat Exchanger Advantage:

- ▶ Our stainless steel sleeved aluminum core heating tubes transfer heat 10 times faster than stainless alone.
  - Maximizes the Mascot FT efficiency and heating response
- ▶ Hot flue gas is evenly divided along the inside of the multi channel fire tubes while causing turbulent flow.
  - Releases stored heat trapped inside the hot flue gases to better transfer heat from the boiler to your home
  - Reduces stress points in the heat exchanger for longer boiler life
- ▶ Heating surface is up to five times larger than other condensing boilers
  - Results in a smaller and lighter weight unit



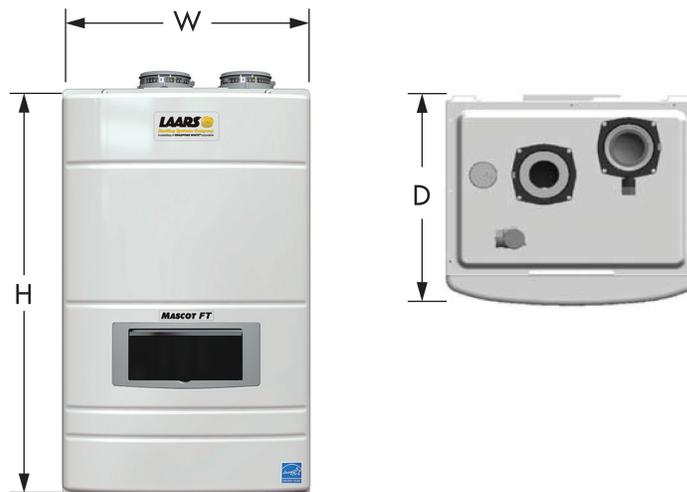
**Advanced Fire Tube Heat Exchanger Technology**

# MASCOT FT Specifications

SPECIFICATION	UNITS / CONDITION	Combi Boilers		Heating Only Boilers				
		MFTCW140	MFTCW199	MFTHW80	MFTHW100	MFTHW120	MFTHW140	MFTHW199
Input, Max Fire	Input, MBH (kW)	140,000	199,000	80,000	100,000	120,000	140,000	199,000
Output, Max Fire	MBH (kW)	133,000	189,050	74,400	93,000	111,600	130,200	189,050
Weight, Unit	lbs. (kg) lbs. (kg)	100 (45)	110 (50)	90 (41)		110 (50)		125 (57)
H x W x D	Inches	29 x 17.3 x 15.5	32 x 19.6 x 16.3	29 x 17.3 x 15				
Turndown	—	5:1	10:1	5:1				
Heating "CH" Supply	NPT	1"		1 1/4"				
Heating "CH" Return	NPT	1"		1 1/4"				
DHW Outlet	NPT	3/4"		—				
DHW Inlet	NPT	3/4"		—				
DHW Flow Rate	35°F Rise – GPM (l/m)	7.1 (27)	9.8 (37)	—				
	45°F Rise – GPM (l/m)	5.5 (21)	7.7 (29)	—				
	77°F Rise – GPM (l/m)	3.2 (12)	4.8 (18)	—				
Minimum Flow Rate	GPM (l/m)	0.5 (1.9)		—				
Gas Inlet	NPT	1/2"***	3/4"	3/4"				
Efficiency	AFUE	95%						
Condensate Line	NPT	1/2						
Gas Supply Pressure	In WC	3.5 - 14						
Pressure Relief Settings	psi (kPa)	30 (207)						
Air Intake Collar	Inches (cm)	3 (7.6)						
Exhaust Outlet Collar	Inches (cm)	3 (7.6)						
Vent Diameter & Equivalent Length	inches / ft.	2 / 50*						
		3 / 100						
Vent Material	—	PVC, CPVC, Polypropylene, SS AL29-4C						
Fuel	—	Natural Gas or Propane						
Power Supply	Volts / Hertz	120 / 60						
Warranty	—	Limited 10 Year Warranty						

\*Propane Models are limited to 25 equivalent feet of vent of 2" diameter vent.

\*\*3/4" coupling provided.



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



800.900.9276 • FAX 800.559.1583 (Customer Service, Service Advisors)  
 20 Industrial Way, Rochester, NH 03867 • 603.335.6300 • FAX 603.335.3355 (Applications Engineering)  
 1869 Sismet Road, Mississauga, Ontario, Canada L4W 1W8 • 905.238.0100 • FAX 905.366.0130

[www.Laars.com](http://www.Laars.com)

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