

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

Easily field-convertible  
to propane

**LAARS**<sup>®</sup>  
Heating Systems Company



# 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)

**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)

**Central Heat Circulator**

**High Performance Blower**

Allows for a quiet, highly efficient combustion and wide range of vent options.

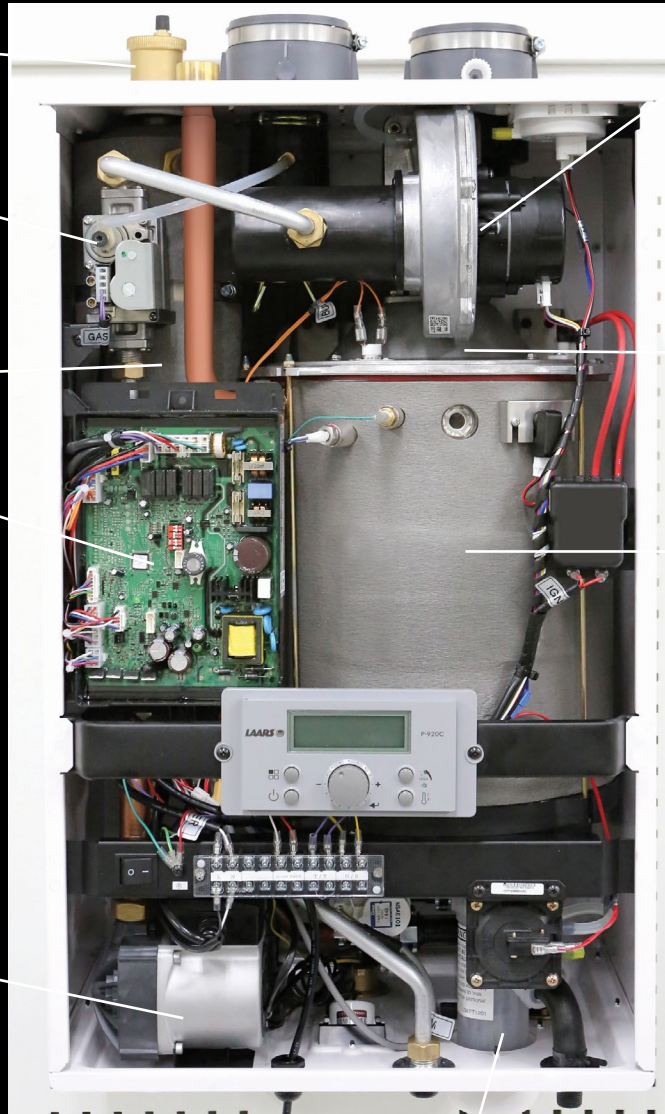
**Clean Burning Burner**

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

**Advanced Fire Tube Heat Exchanger**

Stainless steel heat exchanger offers superior performance and 95% efficiency at low pressure drops.

**Condensate Trap**



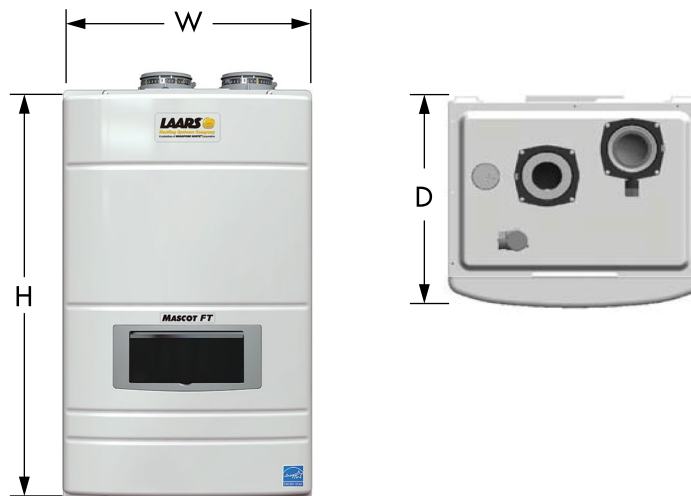
By combining both storage and recovery capacity, the Mascot FT Domestic Hot Water heat exchanger bridges the comfort gap between instantaneous and tank-type water heating equipment.

- ▶ Provides immediate response to demand
- ▶ Hot boiler water inside the tank provides immediate recovery
- ▶ Heated in a coiled, corrugated stainless tube contained in a heavily-insulated stainless tank
- ▶ Inside the tank, 158°F boiler water surrounds the domestic hot water coil
- ▶ Contains approximately one gallon of storage

# MASCOT FT Specifications

SPECIFICATION	UNITS / CONDITION	Combi Boilers		Heating Only Boilers		
		MFTCW140	MFTCW199	MFTHW100	MFTHW140	MFTHW199
Input, Max Fire	MBH (kW)	140,000	199,000	100,000	140,000	199,000
AHRI Cert. Heating Capacity	—	129,000	181,000	93,000	129,000	181,000
Weight, Unit	lbs. (kg) lbs. (kg)	111 (50)	130 (59)	98 (44)	102 (46)	118 (54)
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		32 x 19.6 x 16.3
Turndown	—	5:1	10:1	5:1		10:1
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	3/4"	3/4"	3/4"		
Certified 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*		
Vent Material	—			3 / 100		
Fuel	—			PVC, CPVC, Polypropylene, SS AL29-4C		
Power Supply	Volts / Hertz			Natural Gas or Propane		
Warranty	—			120 / 60		
				Limited 10 Year Warranty		

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



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



**Customer Service and Product Support:** 800.900.9276 • Fax 800.559.1583  
**Headquarters:** 20 Industrial Way, Rochester, NH 03867 • 603.335.6300 • Fax 603.335.3355  
 9 Brigden Gate, Halton Hills, Ontario, Canada, L7G 0A3 • 905.203.0600 • Fax 905.636.0666  
[www.LAARS.com](http://www.LAARS.com)