

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

# MASCOT FT

Floor Standing Combination Boiler & Water Heater

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) floor standing boiler packed with features. It easily satisfies the 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 a 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



## 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.

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



## Enough Hot Water for Everyone

The Laars Mascot FT uses a condensing heat exchanger and integrated indirect tank design that combines the best of space and domestic water heating into one compact system. The indirect tank

is kept charged with three gallons of hot water, always on standby to ensure that you have ample hot water available as fast as possible.

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

The indirect tank makes sure you have an abundance of 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

## Clean Burning Burner

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

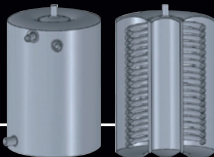
## Laars Integrated Control

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

## Integrated Domestic Hot Water Indirect Tank

Three gallons of domestic hot water available at all times for quick response.

- Reliable indirect heat exchanger design
- Premium grade stainless steel
- Plentiful domestic hot water flow rates



## High Performance Blower

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

## Modulating Gas Valve

Easily converted in the field from natural gas to propane

## Central Heat Circulator

## Advanced Fire Tube Heat Exchanger

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

## Condensate Trap

## Domestic Water Circulator

## 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



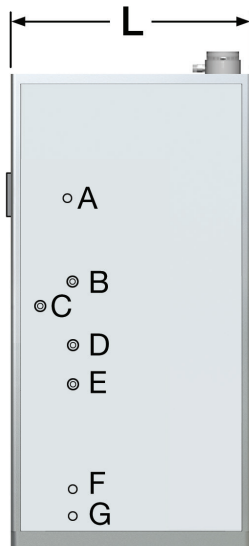
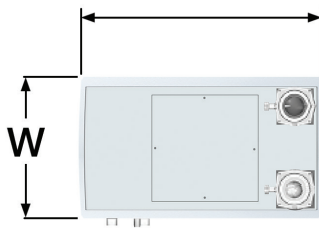
Advanced Fire Tube Heat Exchanger Technology



# MASCOT FT Specifications

SPECIFICATION	UNITS / CONDITION	MFTCF140	MFTCF199
Input, Max Fire	MBH (kW)	140 (41)	199 (58)
Output, Max Fire	MBH (kW)	133 (39)	189 (55)
Turndown	—	5:1	10:1
Efficiency / Energy Factor	AFUE	95%	
Fuel	—	Natural Gas or Propane	
DHW Flow Rate	35° F Temp Rise – GPM (l/m)	7.1 (26.8)	9.9 (37.5)
	45° F Temp Rise – GPM (l/m)	5.5 (20.8)	7.7 (29.1)
	77° F Temp Rise – GPM (l/m)	3.2 (12.1)	4.8 (18.2)
Minimum Flow Rate	GPM (l/m)	0.5 (1.9)	
Gas Supply Pressure	(In WC)	3.5" to 13"	
Pressure Relief Settings	psi (kPa)	30 (207)	
Vent Diameter / Eq Length*	inches / ft	2" / 50"	
		3" / 100'	
Vent Material	—	PVC, CPVC, Polypropylene	
Power Supply	Volts / Hertz	120 / 60	
Weight Unit	lbs. (kg)	150 (68)	180 (82)
Weight Shipping (Est.)	lbs. (kg)	170 (77)	200 (91)
Dimensions (W x H x L)	inches	15.7 x 52.4 x 26.7	15.7 x 53.7 x 26.7
Warranty	—	Limited 10 Year Warranty	

\*Propane models vent limited to 25 equivalent feet in length.



Item	Description	Diameter
A	Gas Inlet Connection (NPT) 140 MBH	1/2"
A	Gas Inlet Connection (NPT) 199 MBH	3/4"
B	Space Heating 'CH' Supply (NPT)	1"
C	Space Heating 'CH' Return (NPT)	1"
D	DHW Outlet (NPT)	3/4"
E	DHW Inlet (NPT)	3/4"
F	Condensate Line (NPT)	1/2"
G	Drain Line (NPT)	1/2"
I	Air Intake Collar	3"
O	Exhaust Outlet Pipe Collar	3"

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

