

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

95% Efficient (AFUE)

5:1 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® 

Heating Systems Company

A subsidiary of **BRADFORD WHITE**® Corporation

High Efficiency Fire Tube Combi Boiler



The Mascot FT is a combination ("Combi" - heating and domestic hot water) or heating wall mounted boiler packed with features that easily satisfy 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 Straight Forward to Use 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 reduce heating bills when compared to older, low efficient boilers – up to 20% lower! Potentially save 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 (5:1) during cool days to reduce fuel use even further
- ▶ Maximum Rebate Eligible - check federal, state and local rebates for up front savings!

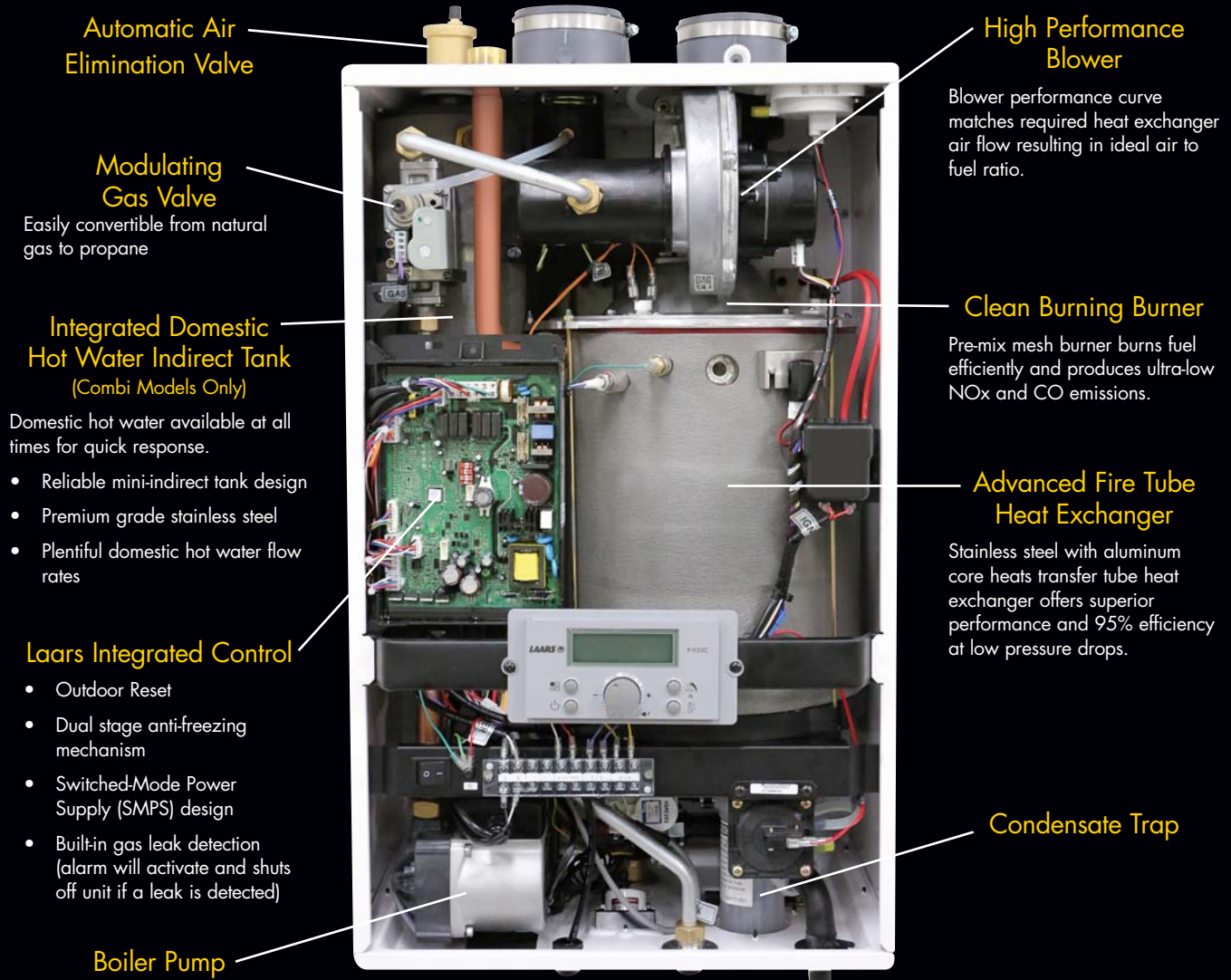


When the half gallon of hot water begins to be used by your faucet, shower, etc. the boiler fires and immediately begins to produce more hot water.

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
- Switched-Mode Power Supply (SMPS) design
- Built-in gas leak detection (alarm will activate and shuts off unit 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 burns fuel efficiently and produces ultra-low NOx and CO emissions.

Advanced Fire Tube Heat Exchanger

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

Condensate Trap

Laars Mascot FT Heat Exchanger Advantage:

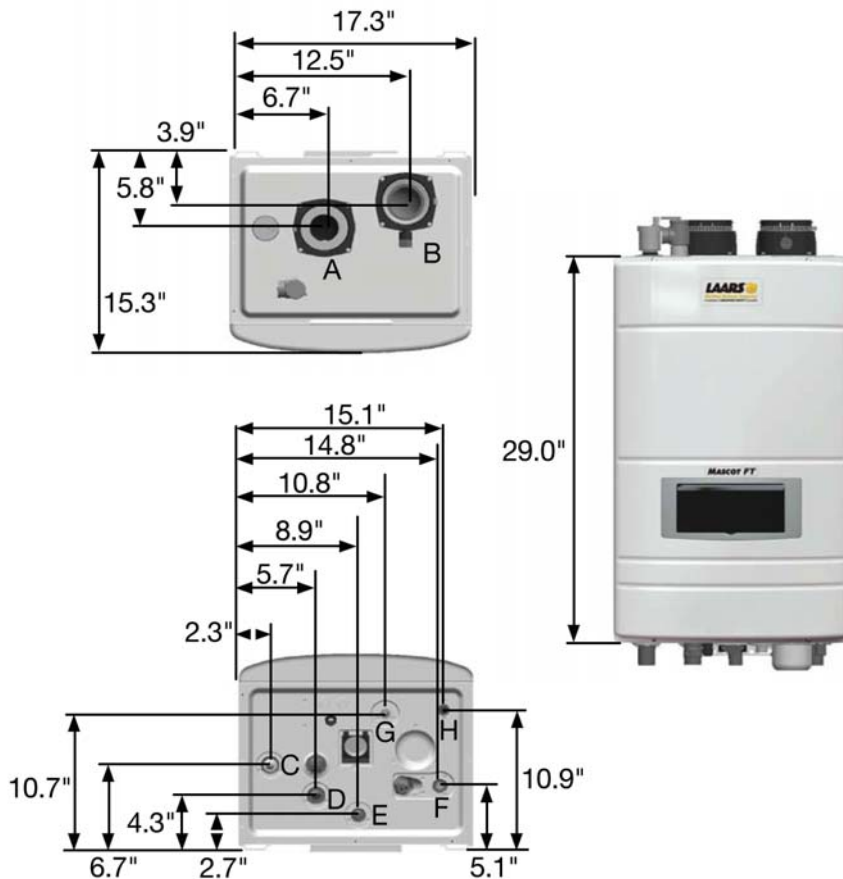
- ▶ Our stainless steel sleeved aluminum core heating tubes transfer heat 10 times faster than stainless alone
 - Maximizes the Mascot FT efficiency and heating response
- ▶ Hot flue gas is evenly divided along the inside of the multi channel fire tubes while causing turbulent flow
 - Releases stored 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	MFTHW140 Heating Only	MFTCW140 Combi	MFTHW199 Heating Only	MFTCW199 Combi
Input, Max Fire	MBH (kW)	140 (41)	199 (58)	199 (58)	199 (58)
Output, Max Fire	MBH (kW)	133 (39)	189 (55)	189 (55)	189 (55)
Turndown	—	5:1			
Efficiency	AFUE	95%			
Fuel	—	Natural Gas or Propane			
Gas Supply Pressure	In WC	3.5 - 14			
DHW Flow Rate	35° F Temp Rise – GPM (l/m)	—	7.1 (27)	—	10 (38)
	45° F Temp Rise – GPM (l/m)	—	5.5 (21)	—	8 (30)
	77° F Temp Rise – GPM (l/m)	—	3.5 (13)	—	4.7 (18)
Minimum Flow Rate	GPM (l/m)	—	0.5 (1.9)	—	0.5 (1.9)
Pressure Relief Settings	psi (kPa)	30 (207)			
Vent Diameter / Eq Length	inches / ft	2 / 50			
		3 / 100			
Vent Material	—	PVC, CPVC, Polypropylene, SS AL29-4C			
Power Supply	Volts / Hertz	120 / 60			
Max Power Load	Watts	160			
Weight Unit	lbs. (kg)	97 (44)	120 (54)	120 (54)	120 (54)
Weight Shipping	lbs. (kg)	102 (46)	125 (57)	125 (57)	125 (57)
Dimensions (W x H x D)	inches	18 x 31 x 16	20 x 37 x 17	20 x 37 x 17	20 x 37 x 17
Warranty	—	Limited 10 Year Warranty			



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

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



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