FT SERIES

Hydronic Boiler

LFTHW | Wall Mounted Boiler

Indoor Sizes 301, 399



Date:

Project #:

Engineer:

Prepared By:

Bid Date:

LAARS Heating Systems Company

Submittal Data

Project Name:

Location:

Contractor:

Standard Equipment

- Stainless steel heat exchanger w/ finned aluminum core fire tubes
- ASME "H" stamp
- ASME 80 psi (551kPa) working pressure
- 95%+ AHRI certified thermal and combustion efficiencies
- Full Modulation:
  - 10:1 turndown (399)
  - 7.5:1 turndown (301)
- 30 psi (207kPa) ASME PRV
- Pressure gauge
- Sealed combustion chamber
- Pre-mix ceramic fiber burner
- Top & bottom water connections
- Top & bottom gas connections
- Wall mount bracket
- Available with floor stand
- Low NOx system exceeds the most stringent regulations for air quality
- Horizontal or vertical direct vent
- Vent and air pipe lengths up to 150 equivalent feet (each)
- Screens for air and vent pipe
- Large user-interface and display
- Electronic PID modulating control
- Cascade up to 4 units. Mixing sizes (301 and 399) is allowed
- Common vent up to 4 boilers
- BACnet gateway available
- Direct spark ignition
- Outdoor reset (sensor included)
- Manual reset high limit
- Low water cutoff
- Customizable freeze protection
- Air filter
- Inlet air flue gas contamination sensor
- Built-in condensate trap and drain
- Automatic air vent
- Air pressure switch
- Burner site glass
- Propane conversion kit
- O-ring and gasket kit included
- 10-year limited heat exchanger warranty
- 5-year limited parts warranty

Boiler Data

Model Number: | **Number of Units:**

- ☐ LFTHW301NX Wall-Mounted Boiler ☐
- ☐ LFTHW399NX Wall-Mounted Boiler ☐
- ☐ LFTHW301NF Boiler with Floor Stand ☐
- ☐ LFTHW399NF Boiler with Floor Stand ☐

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ASME H

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Field Installed Accessory Kits

Common Vent Kits

- ☐ Exhaust vent starter kit (two boilers)
- ☐ Exhaust vent extension kit (add one boiler)
- ☐ Air intake starter kit (two boilers)
- ☐ Air intake extension kit (add one boiler)
- ☐ Flush concentric vent/air terminal 3"
- ☐ Flush concentric vent/air terminal 4"
- ☐ Concentric vent/air terminal 3"
- ☐ 4" vent/air pipe screen
- ☐ Condensate neutralizer
- ☐ Condensate neutralizer with pump
- ☐ BACnet / Modbus Gateway
- ☐ Cascade sensor
- ☐ Cascade cable
- ☐ DHW sensor
- ☐ Mixing control sensor

High altitude conversion kits (5001-10000 feet)

- ☐ Natural gas
- ☐ Propane

Sizing Data

	Size	Input Rate		Turndown Ratio	AHRI Certified Ratings: Combustion Efficiency	AHRI Certified Ratings: Thermal Efficiency	Gross Output		Net AHRI Rating		Product Weight		Shipping Weight	
		MBH	***kw***		***%***	***%***	**MBH**	***kw***	**MBH**	***kw***	**lbs**	***kg***	**lbs**	***kg***
☐	**301 Boiler**	301	*88*	7.5:1	95.4	95.1	286	*84*	249	*73*	240	*109*	265	*120*
☐	**399 Boiler**	399	*117*	10:1	95.9	95.4	379	*111*	330	*97*	250	*114*	275	*125*
☐	**301 Boiler & Stand**	301	*88*	7.5:1	95.4	95.1	286	*84*	249	*73*	275	*125*	310	*141*
☐	**399 Boiler & Stand**	399	*117*	10:1	95.9	95.4	379	*111*	330	*97*	285	*129*	320	*145*

Clearances

Boiler Hung on Wall

	Clearance to Any Surface		Suggested Service Clearance	
	inches	*cm*	inches	*cm*
Front	1	*2.5*	18	*46*
Back	1	*2.5*	1	*2.5*
Left	1	*2.5*	6	*15*
Right	1	*2.5*	6	*15*
Top (Alcove)	9	*23*	24	*61*
Top (Closet)	22	*56*	22	*56*
Bottom	12	*30*	*24*	*61*

Boiler with Floor Stand

	Clearance to Any Surface		Suggested Service Clearance	
	inches	*cm*	inches	*cm*
Front	1	*3*	18	*46*
Back	1	*2.5*	1	*2.5*
Left	1	*2.5*	6	*15*
Right	1	*2.5*	6	*15*
Top (Alcove)	9	*23*	24	61
Top (Closet)	22	*56*	24	61

Electrical Data

Size	Main Supply	Maximum Power Consumption
301	120V 60Hz / 15A	160W
399	120V 60Hz / 15A	160W

Vent System

	3" Combustion Air & Vent Pipe			4" Combustion Air & Vent Pipe		
	Minimum Combustion Air Pipe Length	Minimum Vent Pipe Length	Maximum Combustion Air & Vent Pipe Length	Minimum Combustion Air Pipe Length	Minimum Vent Pipe Length	Maximum Combustion Air & Vent Pipe Length
Pipe Length	0 feet (0 m)	3 feet (1 m)	65 feet (19.5 m)	0 feet (0 m)	3 feet (1 m)	150 feet (45 m)
Deductions per 90° Elbow	5 feet (1.5 m)			5 feet (1.5 m)		
Deductions per 45° Elbow	2.5 feet (0.75 m)			2.5 feet (0.75 m)		
Max. Number of Total Elbows	6			8		

Combustion Air Pipe

Material	United States	Canada
ABS	ANSI/ASTM D1527	Air pipe material must be CPVC, sch 40, ANSI/ASTM or polypropylene, based upon the intended application of the boiler.
PVC, sch 40	ANSI/ASTM D1785 or D2665	
CPVC, sch 40	ANSI/ASTM F441	
Polypropylene	UL1738, ULC S636	
Single wall galv. steel	26 gauge	

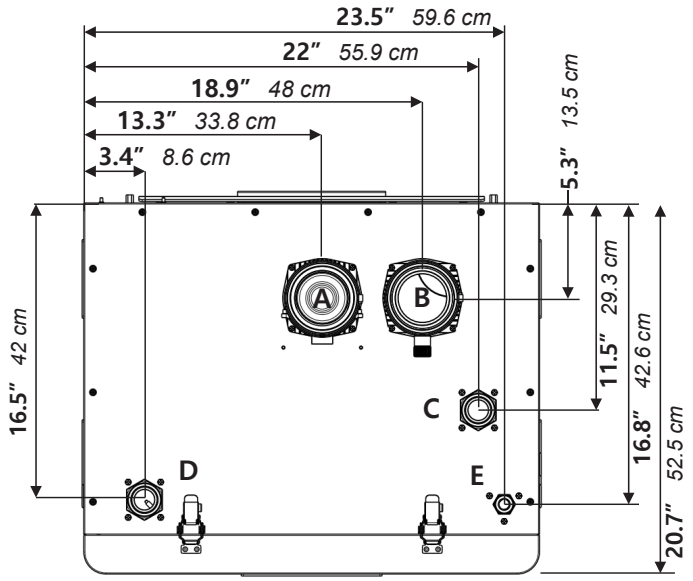
Exhaust Vent Pipe

Material	United States	Canada
Stainless Steel	UL 1738	Venting must be ULC-S636 certified for use as venting material. The venting material must be chosen based upon the intended application of boiler.
PVC, sch 40	ANSI/ASTM D1785	
CPVC, sch 40	ANSI/ASTM F441	
Polypropylene (PP)**	UL1738 or ULC-S636	

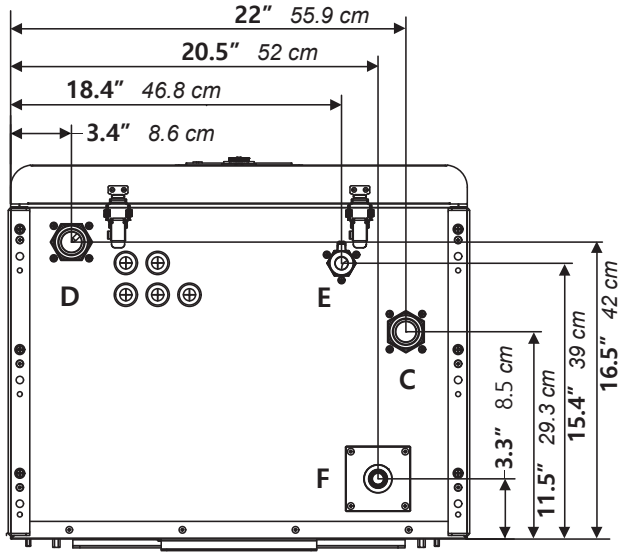
** 3" Polypropylene Flex allowed with restrictions:

- Up to 65 linear feet.
- Vertical vent through the roof ONLY.

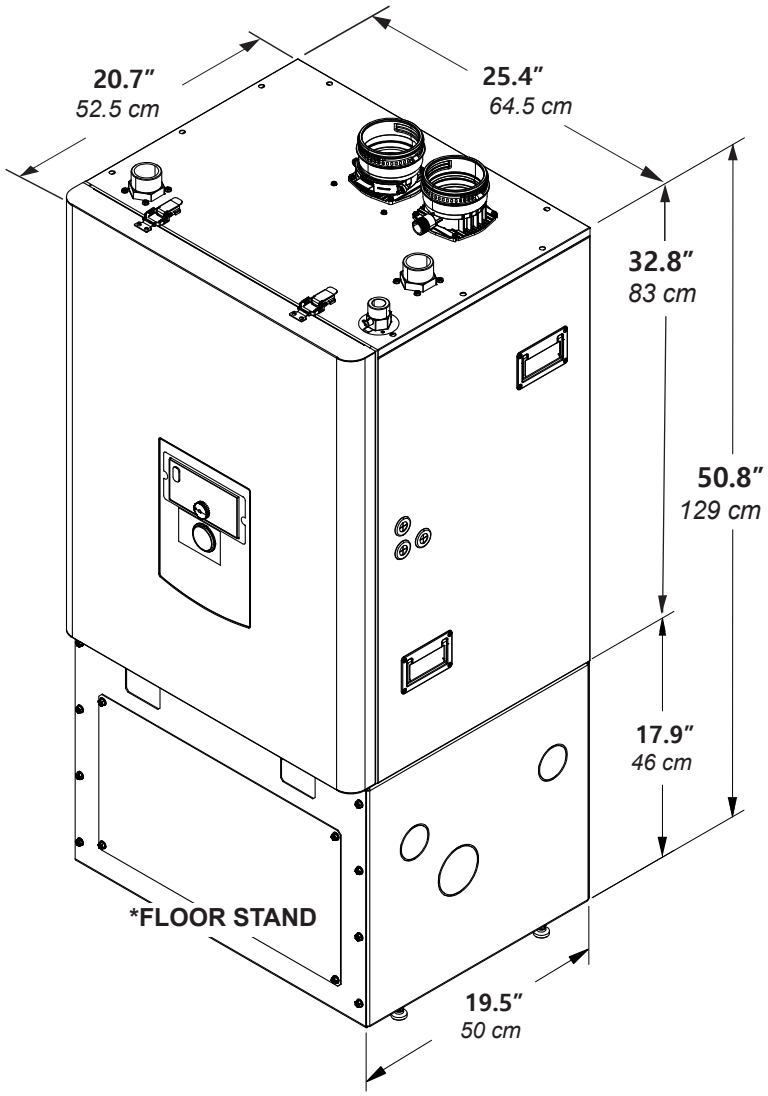
Dimensional Data



TOP VIEW



BOTTOM VIEW



***Floor stand is available separately or ordered with the boiler.**

Callout	Description	Diameter
A	Air Intake Collar	3-inch
B	Vent Pipe Collar	3-inch
C	Boiler Return	1½" NPT
D	Boiler Supply	1½" NPT
E	Gas Inlet	1" NPT
F	Condensate Line	½"

LAARS Heating Systems Company

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