

FT SERIES



Hydronic Combination Boiler

LFTCF | Floor Standing, Combination

Boiler / Water Heater
Indoor, Sizes 199



Date:

Project #:

Engineer:

Prepared By:

Bid Date:

Submittal Data

Project Name:

Location:

Contractor:

Standard Equipment

- High condensing efficiency 95.3% AFUE
- ASME 30 psi (207 kPa) working pressure
- ASME "H" stamp
- Stainless steel fire tube heat exchanger with welded construction
- Integral stainless steel mini boiler tank serves as low loss header and indirect DHW tank
- Low lead compliant
- Boiler pump wired and mounted inside jacket
- Full modulation 100% to 10% (10:1 turndown)
- Electronic PID modulating control
- Large user interface and display
- Receptacle for condensate pump (2A max)
- Supply and return boiler sensors
- Low water cutoff
- Smart DHW priority
- Bonus TT connection for high temp zone
- Accepts 0-10VDC temp setpoint signal
- Connection for DHW recirculation pump
- Outdoor reset (w/ sensor)
- Customizable freeze protection
- Anti-short cycle
- Direct spark ignition
- Manual reset high limit
- Sealed combustion chamber
- Pre-mix ceramic fiber burner
- Natural gas with propane conversion kit included
- Horizontal or vertical direct vent
- Concentric or two-pipe venting options
- Vent and air pipe lengths of up to 100 equivalent feet (each)
- Vent with PVC, CPVC, stainless steel, or polypropylene
- Built-in condensate trap and drain, priming not required
- 3-in-1 brass pipe adapter (for air vent, PRV, optional LWCO)
- 30 psi (207 kPa) pressure relief valve
- Removable and cleanable inlet air filter
- Inlet DHW filter
- Adjustable leveling feet
- Three service panels
- Gas leak detection
- Automatic air vent
- Pressure gauge
- Boiler water pressure switch
- Blocked vent pressure switch
- Blocked condensate pressure switch
- Burner site glass
- 10-Year limited warranty



Boiler Data

Number of Units:

Fuel

Natural*

*Boilers shipped set up for use with Natural Gas and include a Propane conversion kit.

Field Installed Accessories

- Domestic Water Recirculation Sensor
- Neutralizer & Pump (fits inside and plugs into boiler cabinet)
- Horizontal Concentric 2" PVC Termination
- Horizontal Concentric 3" PVC Termination
- Concentric Flush-Mount 2" Vent Terminal
- Concentric Flush-Mount 3" Vent Terminal
- Appliance Adaptor for Stainless Steel Concentric Vent
- Appliance Adaptor/Starter Kit for Polypropylene Concentric Vent
- Polypropylene Offset Kit
- Polypropylene to Stainless Steel Adaptor
- Polypropylene Telescopic Concentric and 90° Elbow Kit
- 2" Vent/Air Pipe Screen*

*Note that boiler is shipped with two 3" screens

Sizing Data

| Model | AHRI Certified Heating Capacity | | Net AHRI Rating | | AHRI Certified AFUE % | Gas Conn. Size inches | Heating Supply & Return Conn. Size inches | | DHW Conn. Size inches | DHW Recirc Conn. Size inches | Shipping Weight | | |
|-----------------------------------|---------------------------------|----|-----------------|----|-----------------------|-----------------------|---|---------|-----------------------|------------------------------|-----------------|-----|----|
| | MBH | kW | MBH | kW | | | inches | inches | | | lbs | kg | |
| <input type="checkbox"/> LFTCF199 | 199 | 58 | 182 | 53 | 158 | 46 | 95.3 | 3/4 NPT | 1-1/2 NPT | 3/4 NPT | 3/4 NPT | 143 | 65 |

NOTES:

1. For other boiler ratings:

$$\text{Boiler Horsepower: HP} = \frac{\text{Output}}{33,475} \quad \text{Radiation Surface: EDR sq. ft.} = \frac{\text{Output}}{150}$$

2. The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.

Domestic Hot Water Capacity

| Model | 35°F Rise GPM /m | 45°F Rise GPM /m | 77°F Rise GPM /m | Stored DHW Gallons / liters |
|---------|---------------------|---------------------|---------------------|--------------------------------|
| FTCF199 | 9.9 38 | 7.7 29 | 4.8 18 | 0.5 1.9 |

Clearances

| APPLIANCE SURFACE | SUGGESTED SERVICE ACCESS CLEARANCE | |
|-------------------|------------------------------------|-----|
| | INCHES | CM |
| Left Side | 6 | 15 |
| Right Side | 6 | 15 |
| Top | 24 | 61 |
| Back | 1 | 2.5 |
| Front | 18 | 46 |
| Bottom | 0 | 0 |

Electrical Data

| Size | Boiler | | |
|---------|--------|--------|------|
| | Volts | Phase | Amps |
| FTCF199 | 120 | Single | 4 |

Minimum 15A circuit required.

Maximum 2A draw allowed on convenience receptacle.

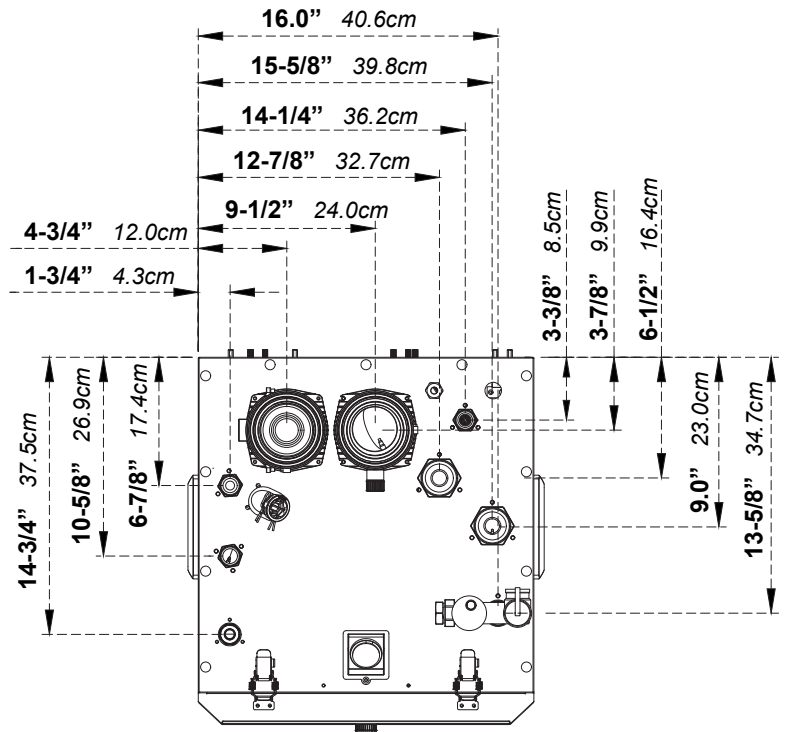
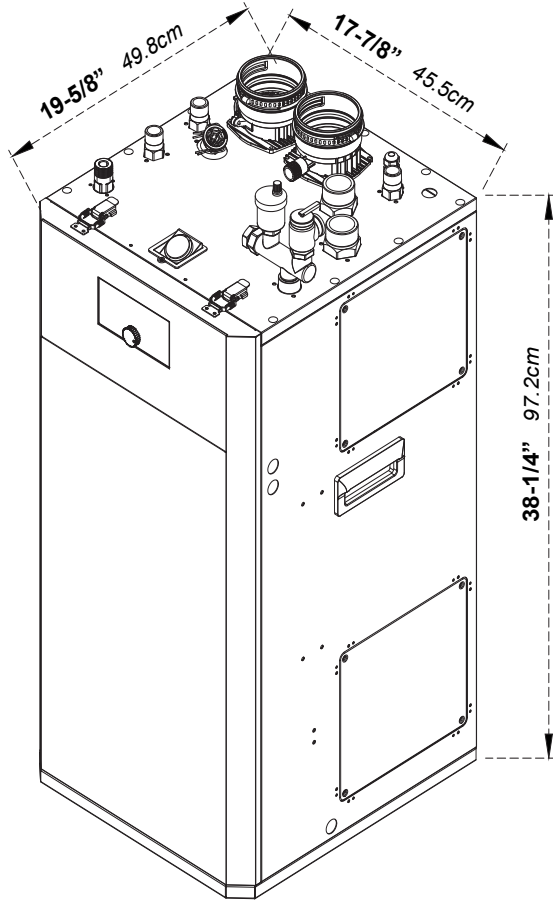
Vent System

| SIZE | INTAKE / EXHAUST Max Equivalent Vent and Air Pipe Length (each) | | | | | |
|------|--|-----|------|-----------------|-----|------|
| | STANDARD 2-PIPE | | | STANDARD 2-PIPE | | |
| | DIA. | FT. | m | DIA. | FT. | m |
| 199 | 2" * | 50 | 15.2 | 3" | 100 | 30.5 |

* Must use 3x2 adapter within 1ft (3cm) of boiler. Reference the Installation and Operation Manual for more details.

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Dimensional Data



| Description | Size |
|---------------------------|---------------|
| Gas Supply | 3/4" NPT |
| Heating Water Outlet | 1-1/2" NPT |
| Heating Water Inlet | 1-1/2" NPT |
| Domestic Water Inlet | 3/4" NPT |
| Domestic Water Outlet | 3/4" NPT |
| Recirculation Water Inlet | 3/4" NPT |
| Air Vent | 1" NPT |
| Air Intake Collar | 3" |
| Exhaust Vent | 3" |
| Boiler drain | 1/2" NPT |
| Condensate Line | 1/2" (no NPT) |

