



**Lochinvar**<sup>®</sup>  
HIGH EFFICIENCY BOILERS & WATER HEATERS

**FTXL Fire Tube  
Condensing Boiler  
Submittal Sheet**

**FTX-Sub-02**

**FTXL FIRE TUBE BOILERS**

**JOB NAME** \_\_\_\_\_

**LOCATION** \_\_\_\_\_

**ENGINEER** \_\_\_\_\_

**WHOLESALE** \_\_\_\_\_

**MECH. CONTRACTOR** \_\_\_\_\_

**MODEL NO.** \_\_\_\_\_

**TYPE GAS** \_\_\_\_\_

**Btu/hr INPUT** \_\_\_\_\_

**Btu/hr OUTPUT** \_\_\_\_\_

**NOTES** \_\_\_\_\_

**SMART SYSTEM FEATURES**

- › **Smart System Digital Operating Control**  
Multi-Color Graphic LCD Display w/Navigation Dial
- › **Loch-N-Link™ USB Thumb Drive Port for Easy Programming**
- › **Cascading Sequencer with Built-in Redundancy**  
Selectable Cascade Type:  
Lead Lag/Efficiency Optimization  
Multiple Size Boilers  
Front-End Loading
- › **3 Reset Temperatures Inputs w/Independent Outdoor Reset Curves for Each**  
Outdoor Sensor
- › **Four-Pump Control**  
System Pump with Parameter for Continuous Operation  
Boiler Pump with Variable-Speed Control  
Domestic Hot Water Boiler Pump  
Domestic Hot Water Recirculation Pump Control with Sensor
- › **Building Management System Integration**  
0-10 VDC Input to Control Modulation or Setpoint  
0-10 VDC Input from Variable-Speed System Pump  
0-10 VDC Modulation Rate Output Signal  
0-10 VDC Enable/Disable Signal
- › **Programmable System Efficiency Optimizers**  
Space Heating Night Setback  
DHW Night Setback  
Anti-Cycling  
Ramp Delay  
Boost Time and Temperature
- › **High-Voltage Terminal Strip**  
120 VAC/60 Hertz/1 Phase  
Pump Contacts for 3 Pumps

- › **Low-Voltage Terminal Strip**  
Building Recirculation Pump Start/Stop  
Building Recirculation Return Temp Sensor Contacts  
Proving Switch Contacts  
Flow Switch Contacts  
Alarm Contacts  
Runtime Contacts  
3 Space Heat Thermostat Contacts  
Tank Thermostat Contacts  
System Sensor Contacts  
Tank Sensor Contacts  
Cascade Contacts  
0-10 VDC BMS Contacts  
0-10 VDC Boiler Rate Output Contacts  
0-10 VDC Boiler Pump Speed Contacts  
0-10 VDC System Pump Speed Contacts  
ModBus Contacts
- › **Time Clock**
- › **Data Logging**  
Ignition Attempts  
Last 10 Lockouts  
Space Heat Run Hours  
Domestic Hot Water Run Hours

**STANDARD FEATURES**

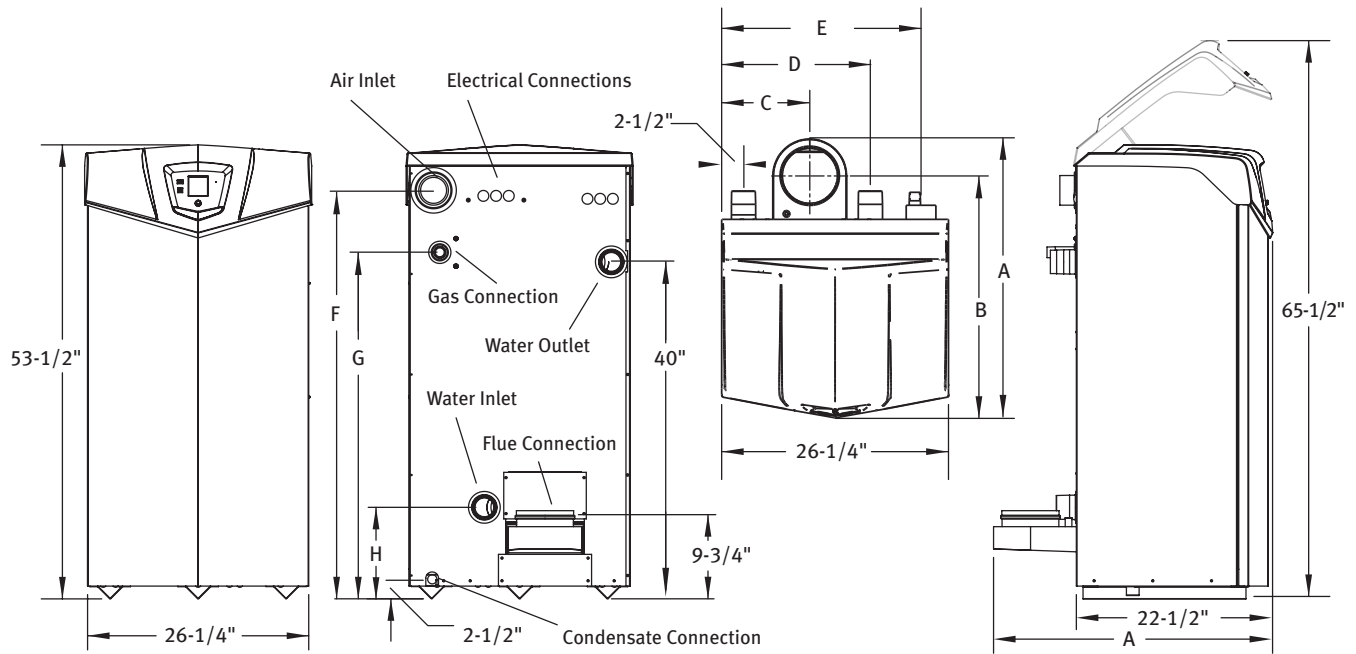
- › **97%-98% Thermal Efficiency**
- › **Modulating Burner with up to 10:1 Turndown**  
Direct Spark Ignition  
Low NOx Operation  
Sealed Combustion  
Low Gas Pressure Operation
- › **Stainless Steel Fire-Tube Heat Exchanger**  
ASME-Certified, "H" Stamped  
160 psi Working Pressure  
50 psi Relief Valve  
Combustion Analyzer Test Port  
Fully Welded Design
- › **Vertical and Horizontal Direct Vent**  
Direct Vent up to 100 feet  
PVC, CPVC, Polypropylene or AL29-4C  
Factory Supplied Sidewall Vent Termination

- › **Smart System Control**
- › **Other Features**  
On/Off Switch  
Adjustable High Limit with Manual Reset  
Automatic Reset High Limit  
Manual Reset Low Water Cutoff  
Flue Temperature Sensor  
Low Air Pressure Switch  
Temperature and Pressure Gauge  
Condensate Trap  
Zero Service Clearances  
10-Year Limited Warranty  
Low Water Cutoff  
Custom Maintenance Reminder with Contact Info  
Password Security  
Customizable Freeze Protection Parameters

**OPTIONAL EQUIPMENT**

- CON-X-US Remote Connectivity  
ModBus Communication  
BMS Gateway to BACnet or LonMark  
SMART SYSTEM PC Software  
Alarm Bell  
Motorized Isolation Valve  
Wireless Outdoor Temperature Sensor  
Multi-Temperature Loop Control  
Variable-Speed Boiler Circulator  
Constant-Speed Boiler Circulator  
Condensate Neutralization Kit  
Concentric Vent Kit (FTX400-FTX600)  
Common Vent Kits  
High and Low Gas Pressure Switches w/Manual Reset (FTX500-FTX850)  
30 psi ASME Relief Valve  
75 psi ASME Relief Valve  
100 psi ASME Relief Valve  
125 psi ASME Relief Valve  
150 psi ASME Relief Valve
- › **Firing Controls**  
M9-Standard Construction  
M13-CSD-1/FM/GE Gap (FTX500-FTX850)

# FTXL Fire Tube Boiler Dimensions & Specifications



FTXL BOILER										DIMENSIONS AND SPECIFICATIONS												
Model Number	Input		Thermal Efficiency	Gross Output MBH	NET AHRI Rating MBH	Turn down	Flow (GPM)		HEX Water Volume	A	B	C	D	E	F	G	H	Water Conn.	Vent Size	Air Intake	Gas Conn.	Shipping Wt. (lbs.)
	Min MBH	Max MBH					Min	Max														
FTX400(N,L)	40.0	399.9	98.0%	392	341	10:1	10	105	13	30-1/2"	27-1/2"	10-1/4"	17"	23-1/4"	46-1/4"	39-1/2"	10-3/4"	2"	4"	4"	1"	435
FTX500(N,L)	50.0	500.0	97.7%	489	425	10:1	15	105	12	30-1/2"	27-1/2"	10-1/4"	17"	23-1/4"	46-1/4"	39-1/2"	10-3/4"	2"	4"	4"	1"	460
FTX600(N,L)	85.0	600.0	97.5%	585	509	7:1	15	105	12	30-1/2"	27-1/2"	10-1/4"	17"	23-1/4"	46-1/4"	39-1/2"	10-3/4"	2"	4"	4"	1"	470
FTX725(N,L)	103.5	725.0	97.2%	705	613	7:1	20	150	17	33"	28-1/2"	10-1/2"	17-1/2"	23-1/2"	48-1/2"	41-1/4"	11"	2-1/2"	6"	4"	1"	510
FTX850(N,L)	121.5	850.0	97.0%	825	717	7:1	25	150	16	33"	28-1/2"	10-1/2"	17-1/2"	23-1/2"	48-1/2"	41-1/4"	11"	2-1/2"	6"	4"	1"	535

\*Information subject to change without notice. Dimensions are in inches. Select "N" or "L" for Natural or LP gas. \*The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15. \*Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc. \*The ratings have been determined under the provisions governing forced draft burners.

FOR EASE IN ORDERING  
BY MODEL NUMBER

FTX 850 N M13



This model is a 850,000 Btu/hr, natural gas FTXL Fire Tube boiler. It has M13 firing controls



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