



## Copper-Fin<sup>®</sup> Gas Fired Boilers

### Lightweight, Flexible and Energy Efficient

Copper-Fin gas-fired boilers are high-efficiency boilers that save space, save money, are lightweight, and are simple to service and install. Copper-Fin boilers are equipped with a built-in draft hood, a highly efficient copper tube heat exchanger, our own specially designed two-stage electronic control system, and they are approved for installation on combustible floors. Models are available with inputs from 315,000 to 500,000 Btu/hr.

#### Two-Stage Control System

The boiler's two-stage electronic temperature control provides flexibility and saves fuel by closely matching heat output to system demand. On colder days the boiler fires at full output, and in warmer conditions the boiler reduces heat output to save energy and reduce boiler cycling.

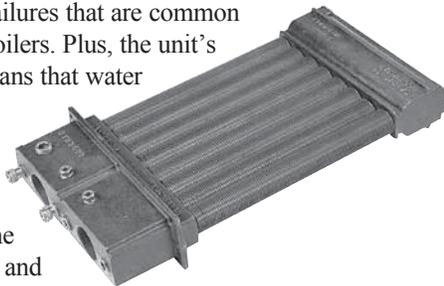
During the majority of the heating season, less than full boiler output is required to satisfy the heat load. For this reason, Lochinvar has developed a two-stage firing system. Two-stage firing - standard equipment on all Copper-Fin boilers, provides dramatic fuel savings by reducing the firing rate 50%. And the two-stage firing control is ideal for applications utilizing outdoor reset.\*

*\*Outdoor reset is available as an option.*

#### Copper Finned Tube Heat Transfer

The heart of the Copper-Fin boiler is its copper finned tube heat exchanger. With this unique gasketless design, we've combined the best of both worlds: cast iron headers for long-lasting durability, and a copper finned-tube heat exchanger for high efficiencies and fast heat transfer. The gasketless heat exchanger design reduces the risk of leaks or system failures that are common with conventional boilers. Plus, the unit's low-mass design means that water gets heated quickly.

Not only is heat up time nearly instantaneous with these boilers, the energy consumption and operating costs are lower too.



#### Intermittent Ignition Device

The Intermittent Ignition Device is a solid-state electronic spark-to-pilot ignition system that reduces fuel consumption. It's electronic circuitry continuously monitors the system and provides pilot gas only when there is a call for heat, eliminating the need for a continuously burning pilot, and providing an additional measure of operational safety.

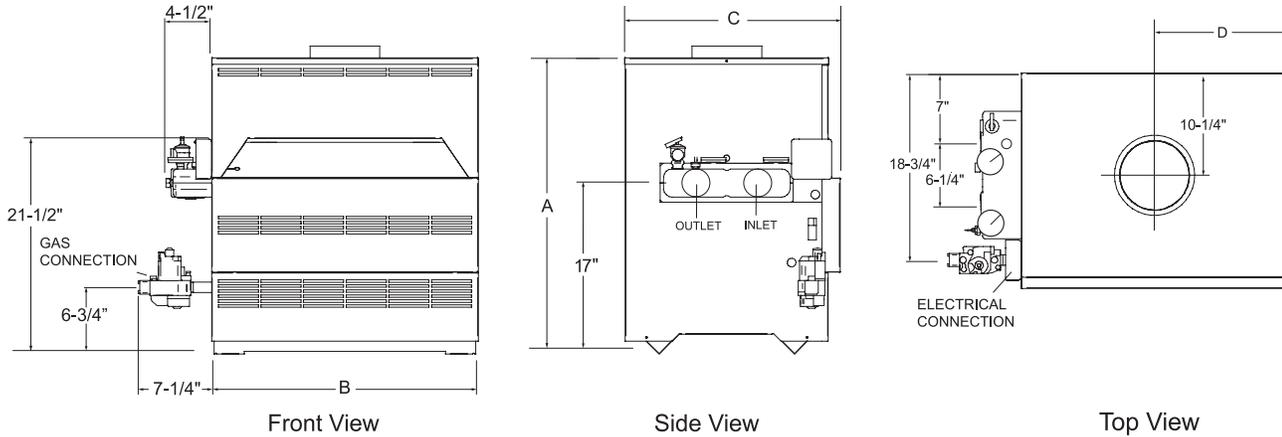
#### Built-In Draft Hood

The lower overall height of the draft hood makes it easier to install the Copper-Fin boiler in all applications, especially in those instances where overhead space is limited and headroom restrictions exist.

#### Serviceability

This boiler is as flexible and convenient to install and service as it is efficient and compact. The heavy-duty stainless steel burners can easily be adapted for use with either natural or liquefied petroleum (LP) gas, and the boiler's design allows for easy access to all major components for servicing. The heat exchanger is designed to slide out the front of the boiler for faster maintenance, and Lochinvar backs it up with an exclusive 10-year Limited Warranty. For more information, call your Lochinvar dealer today.

# Copper-Fin® Boiler Dimensions & Specifications



Copper-Fin Boiler					Dimensions & Specifications							
Model Number	Input MBH	Thermal Efficiency %	Output MBH	Net AHRI Rating MBH	A	B	C	D	Gas Conn.	Vent Size	Ship. Weight	
CBN315	315	82.0	258	224	29-1/2"	32-1/4"	21-1/2"	16-1/4"	3/4"	8"	245	
CBN360	360	82.0	295	257	29-1/2"	35-1/4"	21-1/2"	17-3/4"	1"	9"	255	
CBN399	399	82.0	328	285	29-1/2"	44-1/2"	22"	22-1/4"	1"	10"	320	
CBN500	500	82.0	410	357	34-1/2"	52-1/2"	22"	26-1/4"	1"	10"	345	

**Notes:** Change 'N' to 'L' to denote L.P. gas models  
 No deration for L.P. models.  
 Water Connections are 2" NPT on 6-1/4" centers.  
 Performance data is based on manufacturer test results.

## Standard Features

- 82% Thermal Efficiency
- ASME Copper Finned Tube Heat Exchanger
- Gasketless Heat Exchanger Design
- Two Stage Intermittent Electronic Ignition
- 160 PSI Working Pressure
- Pump Relay
- Two Stage Solid State Temperature Control
- Two Stage Gas Valve with Built-In Manual Shut-Off
- Automatic Reset High Limit
- ASME Pressure Relief Valve
- Temperature & Pressure Gauge

- Built-In Draft Diverter
- CSA Design Certified for Alcove Installation
- CSA Design Certified for Installation on Combustible Floor
- Stainless Steel Burners
- Loch-Heat Ceramic Tile Combustion Chamber
- 24 Volt Control System
- 10 Year Limited Warranty on Heat Exchanger (See warranty for details)

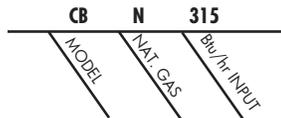
## Optional Equipment

- Adjustable High Limit w/ Manual Reset
- Contacts on any Failure
- Contacts for Air Louvers
- Flow Switch
- Outdoor Air Reset Control
- Low Water Cut-Off
- Multi-Stack Frame
- Pump Delay/Freeze Protection
- MP<sup>2</sup> Sequencer
- 3-Way Low Temperature Valve

## Firing Controls

- M9 - Two-Stage Intermittent Spark Ignition (Standard)
- M13 - GE GAP/FM/IRI
- M7 - California Code

FOR EASE IN ORDERING  
 BY MODEL NUMBER



This model is a 315,000 Btu/hr, natural gas Copper-Fin boiler. It has M9 firing controls

**STACK  
 FRAME**



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