

COPPER-FIN® COMMERCIAL GAS BOILERS


ENERGY EFFICIENT, COST EFFECTIVE BOILERS

Lochinvar first introduced Copper-Fin technology to the boiler industry some 50 years ago. Since then, we've continued to refine and perfect it - adding advanced fan-assisted combustion, hot surface ignition, a unique gasketless copper finned tube heat exchanger and highly efficient insulating materials.

INSTALLATION FLEXIBILITY AND COST-SAVINGS

With compact sizes that use less floor space than ever before, all Copper-Fin units are narrow enough to fit through a standard 36" doorway – an advantage most commercial boilers can't provide. Plus, thanks to special insulating materials, Copper-Fin units require only 3" clearance from combustible walls. What's more, our Stack Frame allows you to install two units in the area normally required for one. This makes it easier to fit multiple Copper-Fin boilers into cramped mechanical rooms. And you can even use a smaller diameter vent stack - up to 8" smaller than typically required for comparable atmospheric boilers - so it saves money as well as valuable mechanical room space.

UNIQUE COPPER-FIN HEAT EXCHANGER



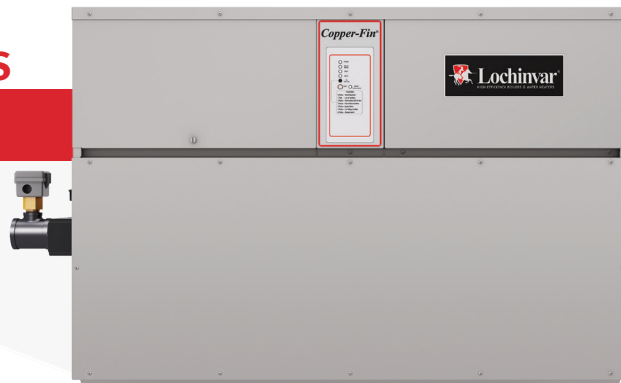
The Lochinvar Copper-Fin boiler design uses a two pass heat exchanger. Water is circulated through a row of highly-efficient, finned copper tubes. The high rate of water flow creates a scouring action that prevents sediment and lime-scale buildup, common in conventional boilers, and the finned copper tubes allow maximum heat transfer efficiency. To create this special heat transfer capability, Lochinvar extrudes the fins from thick wall copper tubing to precise specifications - exactly 7 fins per inch. The result is an integrally-finned tube with a heat transfer ratio 9 times greater than a plain copper tube.

HEAVY-DUTY GASKETLESS DESIGN

What's more, advanced casting processes allowed Lochinvar to develop a unique one-piece header system. This gasketless design provides enhanced reliability, improved durability and optimum performance - without the problems or failures common with O-rings and gaskets.

MEETS THE TOUGHEST AIR QUALITY STANDARDS

Because of our unique fan-assisted combustion process, the Copper-Fin exceeds today's toughest NO_x emissions requirements. An independent certification laboratory test gave us a rating of less than 20 ppm - corrected to 3% O₂. And less NO_x means a cleaner environment.



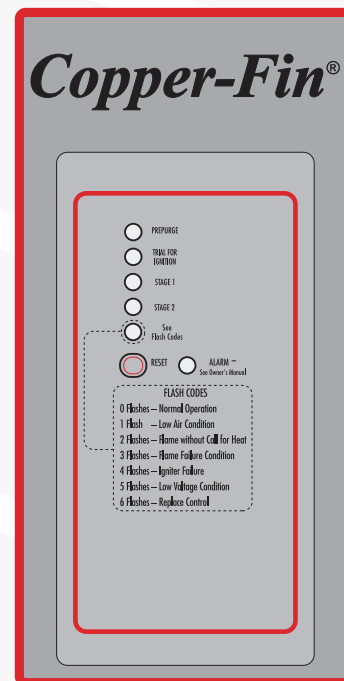
ENHANCED TO PROVIDE PERFORMANCE AND SERVICEABILITY

Our enhanced Copper-Fin models offer the same reliable operation, and feature a more service friendly design. The down stream test valves and referenced gas valves are now in the upper deck for easier access, and the electrical and BMS connections have been repositioned to the front of the unit for easier installation.

The gas valves, which are referenced to the sealed combustion chamber, improve operational performance by monitoring the pressure in the sealed combustion chamber and adjusting gas flow to maintain the optimum air/fuel mixture. And the built-in air inlet filter reduces maintenance and improves performance by trapping dust and airborne particulates that can foul the burners and blowers.

With dual sight glasses (one on each end), you can easily monitor burner performance and flame characteristics throughout the entire combustion chamber.

The operator interface panel provides two-stage electronic temperature control and comprehensive diagnostic status without opening the control panel. Its user friendly design simplifies service while providing additional diagnostic information through a series of LEDs.



DESIGNED ★ ENGINEERED ★ ASSEMBLED

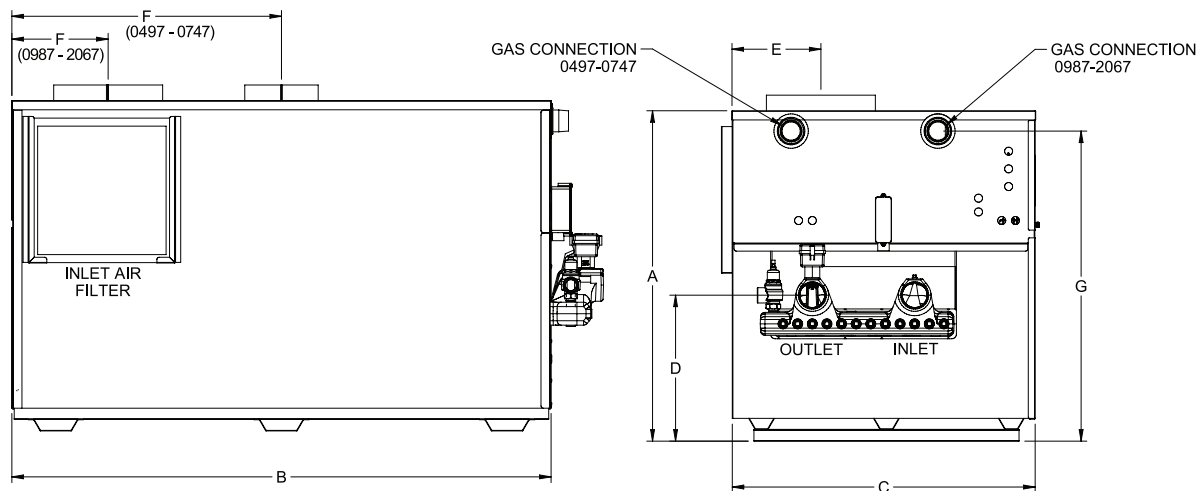
USA



Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

COPPER-FIN® BOILER DIMENSIONS & SPECIFICATIONS



COPPER-FIN HEATING BOILER					DIMENSIONS & SPECIFICATIONS									
Model Number	Input Max MBH	Thermal Efficiency	Heating Capacity MBH	NetAHRI Rating MBH	A	B	C	D	E	F	G	Gas Conn.	Vent Size	Shipping Weight
CBN0497	495	84%	401	349	33-1/4"	45-1/4"	22-1/4"	12-1/2"	9-1/2"	22-3/4"	29-1/2"	1-1/4"	6"	440
CBN0647	645	84%	522	454	33-1/4"	56-3/4"	22-1/4"	12-1/2"	9-1/2"	28-1/2"	29-1/2"	1-1/4"	8"	510
CBN0747	745	84%	603	524	33-1/4"	64"	22-1/4"	12-1/2"	9-1/2"	32"	29-1/2"	1-1/4"	8"	550
CBN0987	985	84%	798	694	36"	48-1/4"	33-1/2"	15-3/4"	8-1/2"	8-1/2"	33-3/4"	2"	10"	845
CBN1257	1255	84%	1,017	884	36"	58-1/2"	33-1/2"	15-3/4"	9-1/2"	10-1/2"	33-3/4"	2"	12"	905
CBN1437	1435	84%	1,162	1,010	36"	68-3/4"	33-1/2"	15-3/4"	10-1/2"	10-1/2"	33-3/4"	2"	12"	1050
CBN1797	1795	84%	1,454	1,264	36"	82-1/4"	33-1/2"	15-3/4"	11"	11"	33-3/4"	2"	14"	1193
CBN2067	2065	84%	1,673	1,455	36"	92-1/2"	33-1/2"	15-3/4"	11"	11"	33-3/4"	2"	14"	1350

Notes: Change 'N' to 'L' for LP gas models.
No deration on LP models.

Performance data based on manufacturer test results.

Water connections for models CB 0497-747 are 2" NPT on 6-1/2" centers.

Water connections for models CB 0497-747 are 2" NPT on 6-1/2" centers.
Water connections for models CB 0987-2067 are 2-1/2" NPT on 11-1/4" centers.

STANDARD FEATURES

- 84% Thermal Efficiency
- Electronic Temperature Control
- Fan Assisted Combustion
- Sealed Combustion Chamber
- Stainless Steel Burners
- ASME Copper Finned Tube Heat Exchanger
- 160 psi Working Pressure
- Gasketless Heat Exchanger Design
- High Voltage Terminal Strip 120V/1PH/60Hz
- Pump Relay w/ Delay
- Down Stream Test Valve
- Referenced Gas Valves
- Loch-Heat Ceramic Tile Combustion Chamber
- Hot Surface Ignition
- Adjustable High Limit w/ Manual Reset
- 50 PSI ASME Pressure Relief Valve
- Temperature & Pressure Gauge
- Flow Switch
- 24 Volt Control System

BMS Terminal Strip
Combustion Air Filter
Freeze Protection
10 Year Limited Warranty on Heat
Exchanger (See warranty for details)

OPTIONAL EQUIPMENT

Alarm Bell	
Contacts on any Failure	
Contacts for Air Louvers	Re
Cupro-Nickel Heat Exchanger	
High & Low Gas Pressure Switch w/ Manual Reset	
Outdoor Reset Control	
Manual Reset Low Water Cut-Off w/ test	
Stack Frame	
MP ² Sequencer	
ASME Pressure Relief Valve 30,75,100,125 & 150 PSI	

For technical information call 800-722-2101. Lochinvar, LLC reserves the right to make product changes or improvements without prior notice.

AVAILABLE FIRING SYSTEMS

M9	Hot Surface Ignition with Electronic Supervision (Standard)
M13	GE GAP/FM/CSD1
M7	California Code

VENTING

Outdoor Vent Cap

Registered under U.S. Patent # 5,989,020

For Ease In Ordering By Model Number

C B	N	0 4 9 7	M 9
MODEL	NAT. GAS	Blu/ht INPUT	FIRING CONTROLS

This boiler is a 495,000 Btu/hr,
natural gas Copper-Fin.
It has M9 firing controls



Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615.889.8900 / F: 615.547.1000

 Lochinvar.com

**CBN-10** (Replace CBN-09 12/19)

1/25-Printed in U.S.A.