## **RESIDENTIAL COPPER TUBE BOILERS**

OLUTION



7 MODELS FROM 45,000 - 260,000 BTU/HR

UP TO 84% AFUE

GASKETLESS HEAT EXCHANGER

TWO STAGE OPERATIONAL CONTROL







# **NO ONE BRINGS IT ALL TOGETHER LIKE LOCHINVAR**

Lochinvar is the industry leader that other leading companies call upon for the most advanced and efficient water heating products in the world. For that reason, Lochinvar is trusted to go beyond the call of duty to find a solution for every project, no matter the size. You will not find a water heating company that works harder or cares more.

That's why no one brings it all together quite like Lochinvar.

# THE RIGHT INVESTMENT

If you're looking for a heating system for your new home, replacing an old boiler, or thinking about converting from expensive electric heat, Lochinvar's Solution heating boiler is the right heating investment for you. You rarely think about heating your home, that is unless you can't get warm enough, or your monthly heating bill just surpassed your house payment. A reliable and efficient heating system is the key to keeping your family comfortable when the weather turns cold. That's why Lochinvar developed the Solution. This gas-fired boiler stands above any other boiler in it's class in terms of comfort, quality, efficiency, flexibility and dependability.

# **BUILT FOR DEPENDABILITY**

Every Lochinvar boiler is made in the USA. Built to commercial grade standards, the Solution boiler is better designed and better built. And every Solution boiler is quality checked throughout the manufacturing process, giving you a boiler built for dependability. When you select Solution, you get home heating that is economical, reliable, flexible, safe and dependable and made here at home in the heartland of the USA. And we back it all up with our exclusive 20-year Limited Warranty.

# **COST SAVINGS HIGH EFFICIENCY**

Often times old boilers operate as low as 50% efficiency. This means that 1/2 of your fuel dollars are wasted up the chimney. A Solution boiler, with an annual fuel utilization efficiency (AFUE) of up to 84%, can reduce your heating bills by over 30%. This means that the Solution boiler can actually pay for itself in just a few short years with the money the old system is wasting. If you are currently spending \$2,000 each year to heat your home with your old inefficient boiler, your fuel savings could be as much as \$800 per year by switching to the 84% efficient Solution boiler. Lochinvar's Solution boiler makes heating your home with gas a smart investment that you'll appreciate for years.



# **INSTALLATION FLEXIBILITY**

Lochinvar designed the Solution to make installations a snap in any home with all piping and venting connections made conveniently from the top of the unit. The Solution is also pre-piped with a pumped performance loop for easy hookup. Lightweight and compact, the Solution's flexibility allows the contractor to spend less time installing your new boiler, which results in savings to you.

# **BUILT-IN FEATURES**

**PVC OR CPVC VENT KIT** (optional) Vent up to 25 feet out a sidewall or rooftop with inexpensive PVC/CPVC (CB 45-135).



#### **BUILT-IN PERFORMANCE LOOP**

Ideal for replacing a cast iron boiler, the performance loop saves time and simplifies installation.

#### IGNITION CONTROL MODULE Controls ignition and includes self

diagnostic indicator lights.



#### STAINLESS STEEL BURNERS

-Ensure long life without rusting.



#### INTERMITTENT SPARK IGNITION

The system safely shuts down on loss of pilot flame in less than one second.

#### **TERMINAL STRIPS**

Auxiliary power contacts for remote control of louvers and fans; or remote control of single stage or two stage firing.



### **COMBUSTIBLE FLOOR BASE**

Design certified for combustible floor installations. (Do not install directly on carpeting.)

## **TWO-STAGE GAS VALVE**

The two-stage gas valve enables the boiler to start on low fire and continue on to high fire.

#### **LO/HI/LO TEMPERATURE CONTROL**

Since full boiler capacity is only needed 20% of the heating season the lo/hi/lo temperature control increases overall system efficiency by only turning the boiler on high fire when extra capacity is needed.

#### DOMESTIC HOT WATER PRIORITIZATION AND OUTDOOR TEMPERATURE RESET

Allows the water temperature produced to vary with the demand of the outdoor conditions and provides domestic hot water production when paired with an indirect storage tank.



## **UNIQUE HEAT EXCHANGER DESIGN**

You will enjoy years of reliable performance because the Solution is constructed with cast iron headers and a gasketless copper-tube heat exchanger. The combination of a copper heat exchanger with cast iron headers has the unique ability to absorb and transfer heat quickly and efficiently while providing unmatched durability.



### Älso available KNIGHT HEATING BOILERS

Need higher efficiency? KNIGHT Heating Boilers are available in sizes from 55,000 to 399,000 Btu/hr and rated up to 98% efficiency in low temperature applications.

### SOLUTION BOILER DIMENSIONS AND SPECIFICATIONS



Front View

Side View

Top View

SOLUTION HEATING BOILER					DIMENSIONS AND SPECIFICATIONS						
Model Number	Input MBH	AFUE %	Heating Capacity MBH	Net AHRI Rating MBH	A	В	C	D	Gas Conn.	Vent Size	Shipping Weight
CBN045	45	84.0	37	32	29-1/2″	11-1/2″	21-1/2″	5-3/4″	1/2″	4″	145
CBN075	75	84.0	62	54	29-1/2″	15-1/2″	21-1/2″	7-3/4″	1/2″	5″	155
CBN090	90	84.0	75	65	29-1/2″	15-1/2″	21-1/2″	7-3/4″	1/2′	5″	155
CBN135	135	84.0	112	97	29-1/2″	19-1/2″	21-1/2″	9-3/4″	1/2″	6″	175
CBN180	180	84.0	149	130	29-1/2″	23-1/2″	21-1/2″	11-3/4″	3/4″	7″	195
CBN215	215	84.0	178	155	29-1/2″	26-1/2″	21-1/2″	13-1/4″	3/4″	7″	220
CBN260	260	84.0	216	188	29-1/2″	29-1/2″	21-1/2″	14-3/4″	3/4″	8″	225
Notes: Change 'N' to 'L' to denote L.P. gas models					Electrical Requirements: 120 VAC / 2 AMP				Water connections are 1-1/2" NPT		

 Notes: Change 'N' to 'L' to denote L.P. gas models
 Electrical Requirements: 120 VAC / 2 AMP

 Net ratings based on piping and pick-up allowance of 1.15
 Approved for indoor installation only

 \*The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.
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#### **STANDARD FEATURES**

ASME Copper Finned Tube Heat Exchanger Gasketless Heat Exchanger Design Built-In Performance Loop Vertical Water Connections 24 Volt Control System Self Diagnostic Ignition Control Terminal Strip Intermittent Electronic Ignition Two Stage Solid State Temperature Control Outdoor Reset with Outdoor Sensor Domestic Hot Water Prioritization Two Stage Gas Valve w/ Built In Manual Shut-Off 160 PSI Working Pressure Pump Relay Automatic Reset High Limit ASME Pressure Relief Valve Temperature & Pressure Gauge Automatic Vent Damper Built-In Draft Diverter Stainless Steel Burners Loch-Heat Ceramic Tile Combustion Chamber CSA Design Certified for Installation on **Combustible Floors** CSA Design Certified for Alcove Installation 20 Year Limited Warranty on the Heat

**OPTIONAL EQUIPMENT** 

Adjustable High Limit w/ Manual Reset Flow Switch Low Water Cut-Off Stack Frame Pump Delay w/ Freeze Protection MP2 Sequencer PVC/CPVC Venting Kit (CB 45-135) O2 Barrier Waterways

Performance data based on manufacturer test results.

 FIRING CONTROL SYSTEMS

 M9
 Two Stage, Intermittant

 Spark Ignition (Standard)

 M7
 California Code

(CB 215-260 only)

FOR EASE IN ORDERING BY MODEL NUMBER CB N 045 M9

045 N M9

This model is a 45,000 Btu/hr, natural gas Solution boiler. It has M9 firing controls

\*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.



Exchanger (see warranty for details)

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ASB-1K-1/19-Printed in U.S.A.

2 Year Parts Warranty