

COMMERCIAL ELECTRIC BOILER

# LECTRUS®

15 - 150 KILOWATTS

MODULATING CONTROL

CASCADE UP TO 8 BOILERS

ASME RATED PRESSURE VESSEL

160 PSI WORKING PRESSURE

 SMART SYSTEM™



DESIGNED ★ ENGINEERED ★ ASSEMBLED

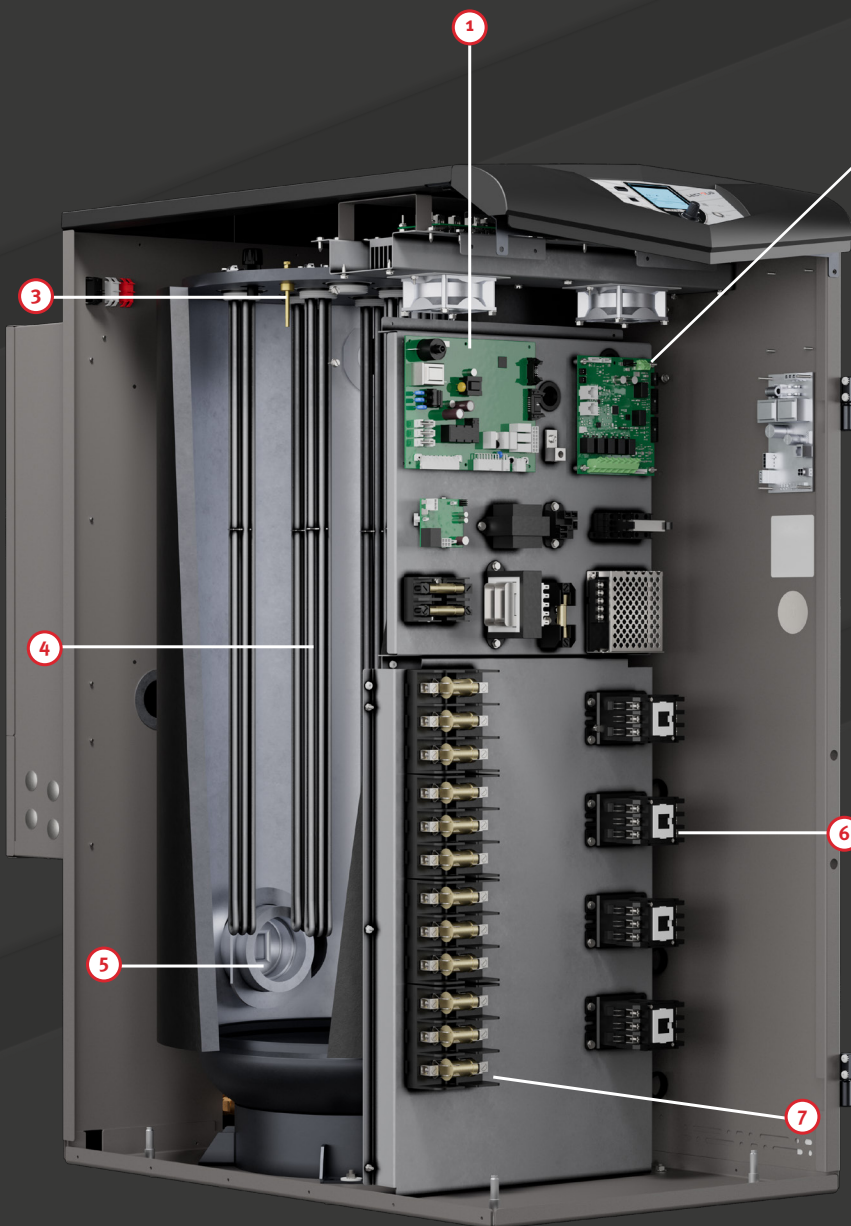
# USA

 **Lochinvar®**

# LECTRUS<sup>®</sup>

In 1986, Lochinvar<sup>®</sup> introduced the Power-Fin<sup>®</sup> boiler to a market looking for a more efficient hydronic heating solution. Almost four decades later, the market is looking again. LECTRUS<sup>™</sup> commercial electric boilers bring yet another solution to Lochinvar's already diverse product portfolio. Whether your goal is decarbonization or creating a dual fuel heating system, LECTRUS can help accomplish those goals. Designed, engineered and assembled at Lochinvar's Lebanon, Tennessee headquarters; LECTRUS is not just another electric boiler. LECTRUS is an electric boiler built with the same expertise and quality that continues to recognize Lochinvar as an industry leader in commercial hydronic heating.

## NO ONE BRINGS IT ALL TOGETHER LIKE LOCHINVAR



2 The LECTRUS' modulation control board rotates the operation of each element bank based on the average runtime of the bank, helping to ensure equal cycles across contactors but also equal runtime for all heating elements.

### LECTRUS FEATURES

1 MAIN CONTROL BOARD

2 MODULATION CONTROL BOARD

3 LOW WATER CUT-OFF PROBE

4 ROBUST INCOLOY SHEATHED 15kW HEATING ELEMENTS

5 3" NPT ASME INSPECTION OPENING

6 CONTACTORS

7 FUSE BLOCKS



LECTRUS features Lochinvar's popular SMART SYSTEM™ control platform. The same interface that Lochinvar boilers have used for years brings a familiar experience to customers; simplifying product set up and troubleshooting. Cascade up to eight LECTRUS boilers or use Front End Loading functionality with LECTRUS and other condensing or non-condensing Lochinvar boilers.



### **THE OPTION YOU NEED - IS STANDARD**

#### **Triac Board(s)**

While other electric boilers require expensive upgrades or a different series altogether, LECTRUS features a fully modulating control as standard construction. Every LECTRUS boiler is built with a modulating element bank, which allows for precise temperature control, reduces contactor cycles and helps extend component life.



## **VESSEL ENGINEERING AND MANUFACTURING EXPERTISE**

To date, Lochinvar has built over 410,000 ASME rated vessels and heat exchangers including:

- Custom Hi-Power electric water heaters from 120-2,500 gallons
- Custom storage tanks up to 5,000 gallons
- Power-Fin's copper heat exchanger
- CREST fire tube heat exchanger

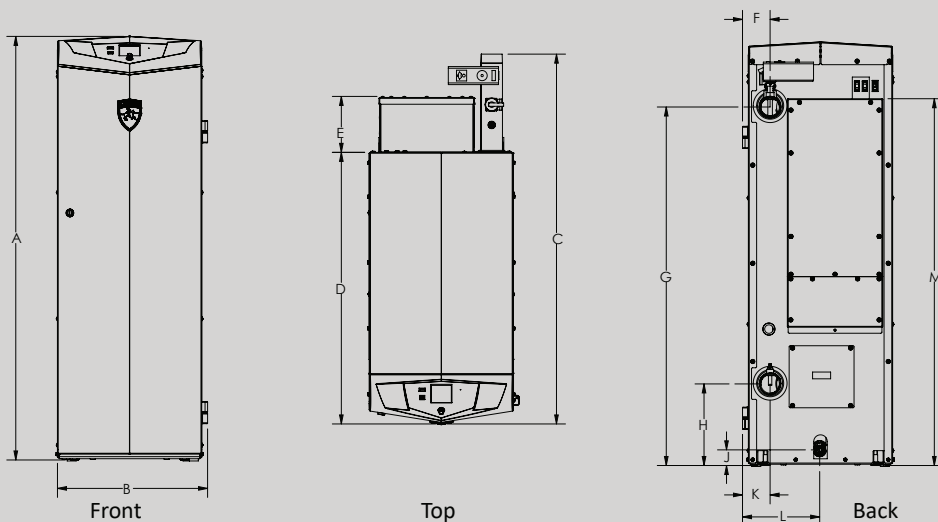
Leveraging engineering and manufacturing expertise makes Lochinvar uniquely qualified to construct the heart of LECTRUS boilers.

### **ASME CONSTRUCTION ON EVERY MODEL**

The LECTRUS boiler features two vessel sizes; 17 gallon vessel for 15-90kw and 32 gallon vessel for 105-150kw models.



# LECTRUS ELECTRIC HEATING BOILER DIMENSIONS & SPECIFICATIONS



Voltage Schedule	
A - 240V	1PH
K - 208V	3PH
X - 480V	3PH
N - 600V	3PH

FOR EASE IN ORDERING  
BY MODEL NUMBER  
KEB 0090 - K

MODEL	WATTAGE	VOLTAGE
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LECTRUS HEATING BOILER					DIMENSIONS AND SPECIFICATIONS													
Model Number	Input KW Min KW	Max KW	Max Flow Rate	Water Volume (Gal)	A	B	C	D	E	F	G	H	J	K	L	M	Water Conn.	Ship Wt. (lbs.)
KEB0015-0090	15	90	105	17	47"	16-3/4"	41"	30-1/4"	6-1/4"	3-1/4"	39-3/4"	9"	1-3/4"	3-1/4"	8-1/2"	40-3/4"	2" NPT	367
KEB0105-0150	105	150	105	32	47"	21-3/4"	45-1/4"	35-1/2"	6-1/4"	3-1/4"	39-3/4"	9"	2-1/4"	4-1/4"	11-1/4"	41-1/4"	2" NPT	488

\*Information is subject to change without notice. Dimensions are in inches. Dimensions shown are with standard 10kA SCCR construction. \*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.

## SMART SYSTEM FEATURES

- SMART SYSTEM Digital Operating Control
  - Multi-Color Graphic LCD Display w/Navigation Dial
  - Triac Control Board(s) - Triode for Alternating Current
  - Loch-N-Link® USB Port for Easy Programming
- Cascading Sequencer with Built-in Redundancy
  - Selectable Cascade Type: Lead Lag/Efficiency Optimization
  - Multiple Size Boilers
  - Front-End Loading
- Temperature Input w/Independent Outdoor Reset Curve
- Three-Pump Control
  - System Pump with Parameter for Continuous Operation
  - Boiler Pump with Variable-Speed Control
  - Domestic Hot Water Boiler Pump
- 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
  - Ramp Delay
  - Boost Time and Temperature
- High-Voltage Terminal Strip
  - Pump Contacts for 3 Pumps
- Low-Voltage Terminal Strip
  - Flow Switch Contacts
  - Alarm Contacts
  - Runtime Contacts
  - Heat Thermostat Contact
  - Tank Thermostat Contacts
  - System Sensor Contacts
  - DHW 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 Last 10 Lockouts
- Space Heat Run Hours
- Domestic Hot Water Run Hours

## STANDARD FEATURES

- ASME-Certified, Steel Pressure Vessel
- 10-Year Vessel Warranty (See Warranty for Details)
- 160 psi Working Pressure

- 50 psi Relief Valve
- Fully Welded Design
- Smart System Control
- 1 - Year Warranty on Parts (See Warranty for Details)
- Other Features
  - On/Off Switch
  - High Limit with Manual Reset
  - Automatic Reset High Limit
  - Manual Reset Low Water Cutoff
  - Temperature and Pressure Gauge
  - Custom Maintenance Reminder with Contact Info
  - Password Security
  - Customizable Freeze Protection Parameters
  - 10 kA SCCR

## OPTIONAL EQUIPMENT

- Integrated dual-energy utility control (field mounted)
- Wireless Outdoor Temperature Sensor
- ModBus Communication
- BACnet MSTP
- Alarm Bell
- 200 kA SCCR (208V 105-150kW are field installed)
- 200 kA Fused Rotary Handle Disconnect (Field Installed)

Model Number	Rating MBH	kW	Elements Qty	kW	Number of : Steps@ kW	FLA 240V	FLA 208V	FLA 480V	FLA 600V
KEB0015-*	51	15	1	15	1@15	63	42	18	15
KEB0030-*	102	30	2	15	2@15	125	84	37	29
KEB0045-*	153	45	3	15	3@15	N/A	125	55	44
KEB0060-*	204	60	4	15	4@15	N/A	167	73	58
KEB0075-*	256	75	5	15	5@15	N/A	209	91	73
KEB0090-*	307	90	6	15	3@30	N/A	250	109	87
KEB0105-*	358	105	7	15	3@30, 1@15	N/A	292**	127	101
KEB0120-*	409	120	8	15	4@30	N/A	334**	145	116
KEB0135-*	460	135	9	15	4@30, 1@15	N/A	375**	163	130
KEB0150-*	511	150	10	15	5@30	N/A	417**	181	145

Features dual electrical feeds to a single distribution block\*\*

- Non-Fused Rotary Handle Disconnect (Field Installed)
- Front Door Solenoid Interlock
- Ground Fault Detection Relay
- Control Enable/Disable E-Stop Button
- Power & Energy Meter
- High Voltage Plexiglass Screen

## CODES AND REGISTRATIONS

- ASME Certified, "H" Stamp/National Board CSD-1
- Canadian Registration Number (CRN)
- CSA C22.2 No. 165/UL834

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



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