

**OUTDOOR CONDENSING
GAS BOILERS**



5 MODELS FROM 399,000 TO 999,000 BTU/HR

96.3% THERMAL EFFICIENCY

10:1 TURNDOWN RATIO

STAINLESS STEEL WATER TUBE
HEAT EXCHANGER

FEATURES **SMART TOUCH**

WITH **CONXUS**
REMOTE CONNECT



Reference KBX literature for more product details.

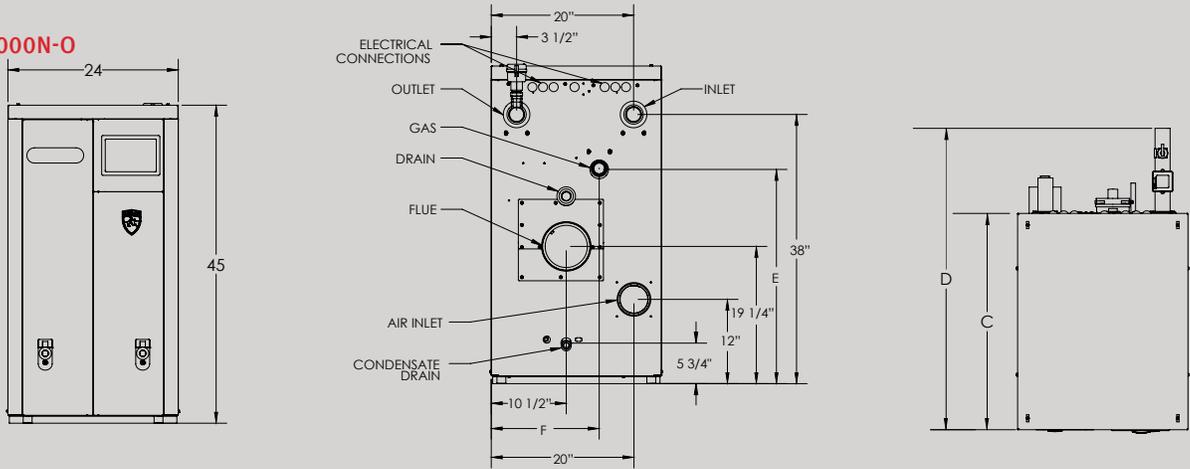
DESIGNED ★ ENGINEERED ★ ASSEMBLED

USA



OUTDOOR KNIGHT XL® BOILER DIMENSIONS AND SPECIFICATIONS

MODELS:
KBX 0400N-O-KBX1000N-O



OUTDOOR KNIGHT XL HEATING BOILER								DIMENSIONS AND SPECIFICATIONS								
Model Number	Input MBH			Gross Output MBH	Net AHRI Rating, Water, MBH	Combustion Efficiency %	Thermal Efficiency %	C	D	E	F	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Ship Wt. (lbs.)
	Min	Max	Turn Down													
KBX0400N-O	39,900	399,000	10:1	387,000	337,000	97.0	97.0	33-1/2"	42-1/2"	29-3/4"	20-1/4"	1"	2"	4"	4"	373
KBX0500N-O	50,000	500,000	10:1	485,000	422,000	97.0	97.0	33-1/2"	42-1/2"	29-3/4"	20-1/4"	1"	2"	4"	4"	390
KBX0650N-O	65,000	650,000	10:1	631,000	549,000	97.0	97.0	42-1/2"	53"	30-1/2"	15-1/4"	1-1/4"	2"	4"	6"	500
KBX0800N-O	80,000	800,000	10:1	776,000	675,000	97.0	97.0	42-1/2"	53"	30-1/2"	15-1/4"	1-1/4"	2"	4"	6"	500
KBX1000N-O	99,900	999,000	10:1	969,000	843,000	97.0	97.0	50"	62"	30-1/2"	15-3/4"	1-1/4"	2-1/2"	6"	6"	580

Notes: Outdoor installation only. All information subject to change. Change "N" to "L" for LP gas models.
*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.

STANDARD FEATURES

- › **96.3% Thermal Efficiency**
- › **Modulating Burner with 10:1 Turndown**
 - Direct Spark Ignition
 - Low NOx Operation
 - Sealed Combustion
 - Low Gas Pressure Operation
- › **Stainless Steel Water Tube Heat Exchanger**
 - ASME-Certified, "H" Stamped
 - 160 psi Working Pressure
 - 50 psi Relief Valve
 - Combustion Analyzer Test Port
 - Fully Welded Design
- › **Other Features**
 - On/Off Switch
 - Adjustable High Limit with Manual Reset
 - Automatic Reset High Limit
 - Flow Switch
 - Flue Temperature Sensor
 - Low Air Pressure Switch
 - Temperature and Pressure Gauge
 - Condensate Trap
 - 10-Year Limited Warranty (See Warranty)
 - Custom Maintenance Reminder with Contact Info
 - Password Security
 - Customizable Freeze Protection Parameters

SMART TOUCH FEATURES

- › **CON-X-US Remote Connect**
- › **Smart Touch Touchscreen Operating Control**
- › **Full Color 7" Touchscreen LCD Display**
- › **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 with 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
 - 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/BACnet Contacts
- › Time Clock
- › **Data Logging**
 - Ignition Attempts
 - Last 10 Lockouts
 - Space Heat Run Hours
 - Domestic Hot Water Run Hours

OPTIONAL EQUIPMENT

- Outdoor Kit
- Constant-Speed Boiler Circulator with Pump Cover
- Alarm Bell
- Condensate Neutralization Kit
- BMS Gateway to BACnet or LonWorks
- BACnet MSTP
- ModBus Communication
- High and Low Gas Pressure Switches w/Manual Reset (KBX0500-KBX1000)
- Low Water Cut-Off with Manual Reset
- LP Conversion Kit
- › **Firing Controls**
 - M9-Standard Construction
 - M13-CSD-1/FM/GE Gap (KBX0500-KBX1000)
 - M7 California Code

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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