



MODEL BMK-1.5LN GWB

TECHNICAL DATA

AERCO LOW NOx Benchmark Gas Fired Hot Water Boiler System

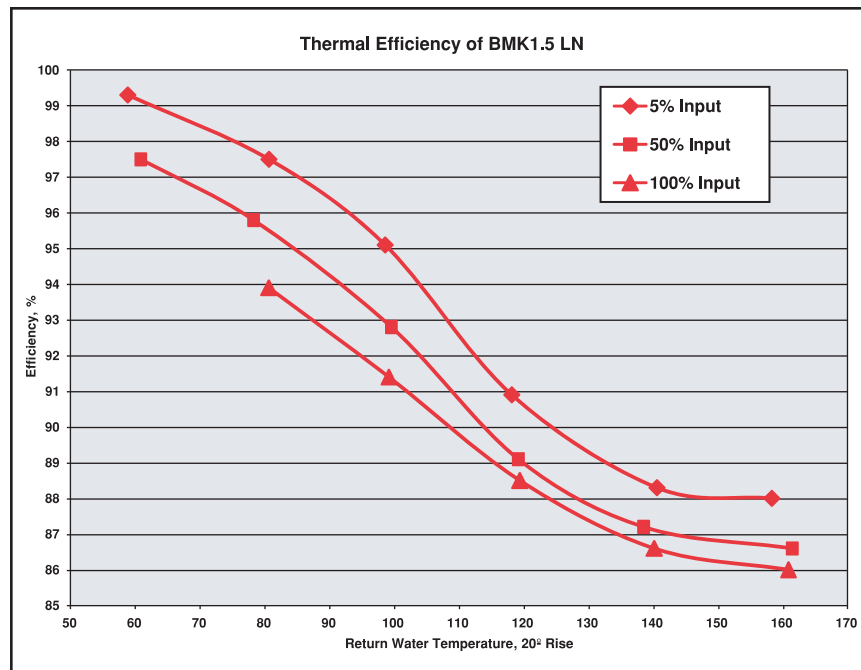
The AERCO Benchmark 1.5 Low NOx (BMK 1.5LN) Water Boiler is designed for condensing application in any closed loop hydronic system. It delivers 20:1 burner turndown to match energy input directly to fluctuating system loads to yield the highest possible seasonal efficiencies. As illustrated below, the unit's operating efficiency actually increases as the load decreases.

To minimize emissions, the BMK 1.5LN is fitted with a low NOx burner whose emissions will consistently measure <30 ppm of NOx corrected to 3% excess oxygen at all firing rates. Certified by SCAQMD, the fully modulating burner also maintains AERCO standards for energy efficiency, longevity, reliability, and construction quality.

The BMK 1.5LN can be used singly or in modular arrangements and offers selectable modes of operation. In addition to controlling the boiler according to a constant setpoint, indoor/outdoor reset schedule or 4-20mA signal, one or more can be integrated via Modbus communications protocol to AERCO's multiple boiler management system (BMS) or a facility-wide Energy Management or Building Automation System.

Operating Efficiency

Comprehensive tests are being conducted to confirm the unit's efficiency over its entire 75,000 to 1,500,000 BTU/hr. operating range for a variety of operating conditions. The initial boundary tests indicate that efficiency up to 99.3% can be achieved when the unit operates at its lowest firing rate (5% input) with 60°F inlet water temperature. Even at full fire (100% input), the BMK1.5 LN delivers exceptional efficiency.

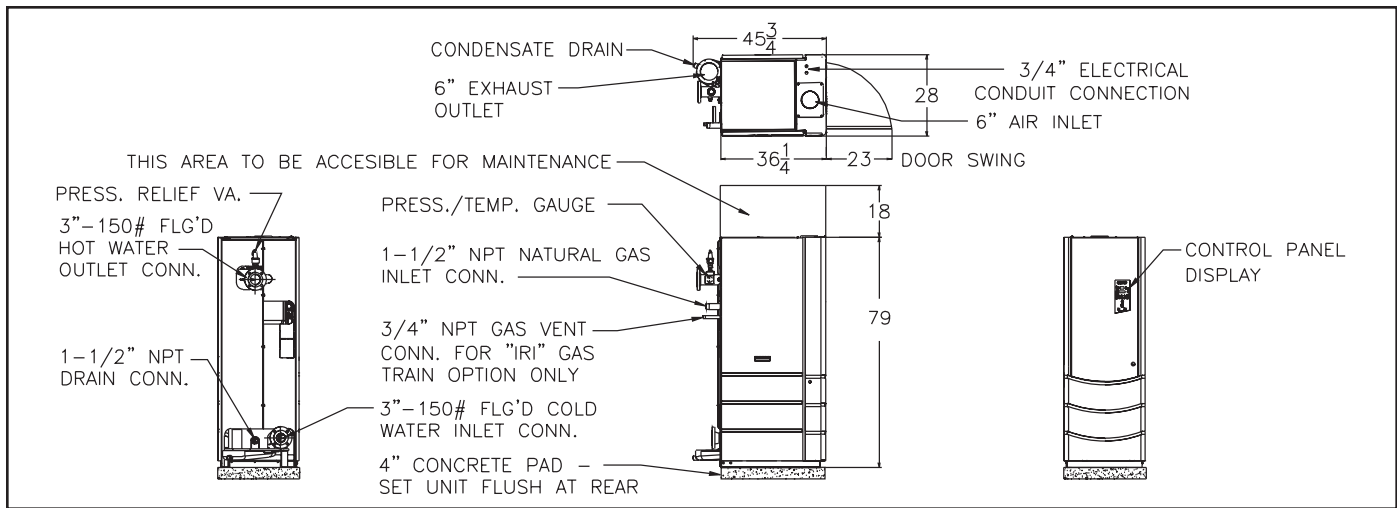


BMK 1.5LN Features

- Natural Gas
- 20:1 Turndown Ratio
- NOx Emissions <30ppm at All Firing Rates
- Direct Vent or Conventional Capabilities
- AL29-4C Vent Materials Required per UL1738
- Quiet Operation Throughout Firing Range
- Internal Low Water Cutoff (Manual Reset)
- Compact Footprint (79"H x 28"W x 36"D)
- Precise Temperature Control $\pm 2^{\circ}\text{F}$
- Sealed Combustion Capable
- Ventless Supply Gas Regulator
- UL, CUL, for Alcove Installation on Combustible Flooring
- (Optional) Dual-Fuel – Natural Gas with Propane Back-Up



Dimensions of BMK-1.5LN Boiler



Ratings and Dimensions

Modules	Model (a)	Mbh Input (b)	Mbh Output (b) (c)	Width (1)	Depth	Height	Weight (wet)
One (1)	BMK-1.5LN	1,500 mbh	1,290 mbh – 1,409 mbh	2'3"	3'10"	6'5"	1,757 lbs.
Two (2)	BMK-1.5LN-2	3,000 mbh	2,580 mbh – 2,817 mbh	6'7"	3'10"	6'5"	3,514 lbs.
Three (3)	BMK-1.5LN-3	4,500 mbh	3,870 mbh – 4,226 mbh	11'0"	3'10"	6'5"	5,271 lbs.
Four (4)	BMK-1.5LN-4	6,000 mbh	5,160 mbh – 5,634 mbh	15'3"	3'10"	6'5"	7,028 lbs.
Five (5)	BMK-1.5LN-5	7,500 mbh	6,450 mbh – 7,043 mbh	19'7"	3'10"	6'5"	8,785 lbs.
Six (6)	BMK-1.5LN-6	9,000 mbh	7,740 mbh – 8,451 mbh	24'0"	3'10"	6'5"	10,542 lbs.
Seven (7)	BMK-1.5LN-7	10,500 mbh	9,030 mbh – 9,860 mbh	28'3"	3'10"	6'5"	12,299 lbs.
Eight (8)	BMK-1.5LN-8	12,000 mbh	10,320 mbh – 11,268 mbh	32'7"	3'10"	6'5"	14,056 lbs.

(1) Assume 24" between units. Zero side wall clearance is not provided. Consult local sales representative.

(a) Style to be determined by individual application requirement.

(b) Altitude below 2,000'. Apply altitude correction factor above 2,000'.

(c) Output dependent upon application – see efficiency curves.

BMK-1.5LN Boiler Specifications

BTU Input 1,500,000 BTU/H*
 Min. Output @ Full Input 1,290,000 BTU/H**
 ASME Working Pressure 160 PSIG
 Electrical Options 120/1/60 20 Amp (13 Amp FLA)
 Gas Requirements 4.0" W.C. Minimum @ Full Load
 2 psi Maximum
 Vent Size 6" Diameter
 Water Connections 3" Flanged 150lb. ANSI
 Gas Connection 1.50" NPT
 Min./Max. Water Flow 0 GPM/225 GPM***

Water Pressure Drop 4.0 PSIG @ 130 GPM
 Water Volume 27 gallons
 Control Range 50°F to 190°F
 Ambient Temperature 0°F to 130°F
 NOx Emissions Certification SCAQMD, TCEQ
 Standard Listings & Approvals UL, CUL, CSD-1, ASME
 Gas Train Options FM Compliant or Factory Installed IRI
 Weight, Installed 1533 (dry), 1757 (wet)

* Up to 2000' Altitude

** Output is dependent upon return water temp. and firing rate.

***25 GPM water flow required for ±2°F temperature control. Boiler can operate safety with zero water flow.

Represented by:



HOT WATER SYSTEMS

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Specifications subject to change.
 Consult website or contact AERCO.
 BMK-1.5LN 12/07 5M
 New DOC 12/07