



# BMK3.0LN GWB

## TECHNICAL DATA SHEET

### AERCO LOW NOx Benchmark Gas Fired Hot Water Boiler System

The AERCO Benchmark 3.0 Low NOx (BMK3.0LN) Water Boiler is designed for condensing application in any closed loop hydronic system. It delivers 15:1 burner turndown to match energy input directly to fluctuating system loads to yield the highest possible seasonal efficiencies. And no other product packs as much capacity into such a small footprint.

To minimize emissions, the BMK3.0LN 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. The fully modulating burner also maintains AERCO standards for energy efficiency, longevity, reliability and construction quality.

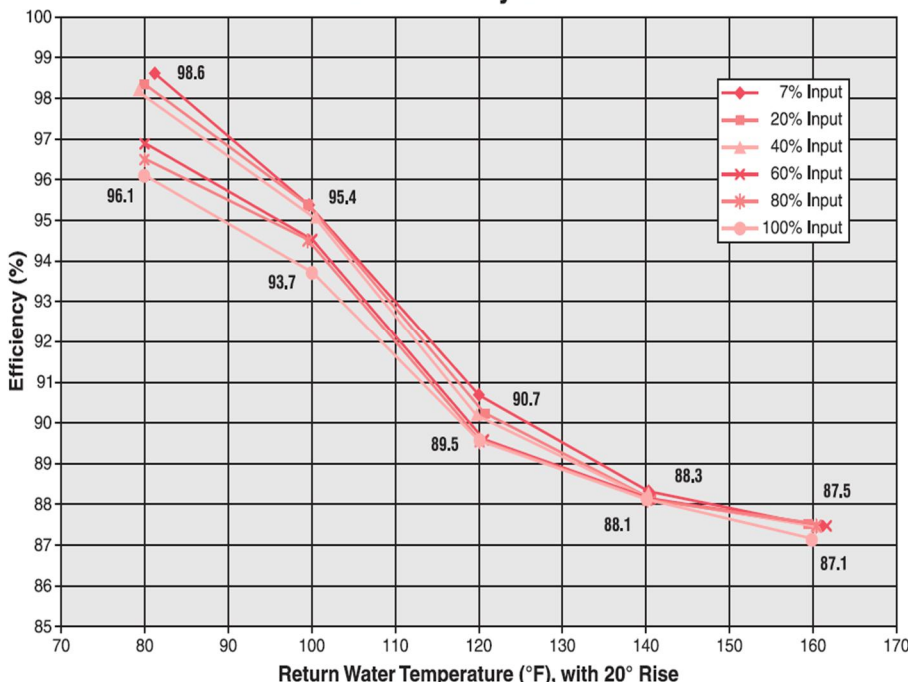
The BMK3.0LN can be used singly or in modular arrangements and offers selectable modes of operation. In addition to controlling the boiler according to a constant set point, indoor/outdoor reset schedule or 4-20mA signal, one or more units can be integrated via Modbus communications protocol to AERCO's multiple boiler management system (BMS) or a facility-wide Energy Management or Building Automation System.



### OPERATING EFFICIENCY

Comprehensive tests were conducted to confirm the unit's efficiency over its entire 200,000 to 3,000,000 BTU/hr. operating range for a variety of operating conditions. These tests indicate that efficiency up to 98.6% can be achieved when the unit operates at its lowest firing rate (7% input) with 80°F inlet water temperature. Even at full fire (100% input), the BMK3.0LN delivers exceptional efficiency.

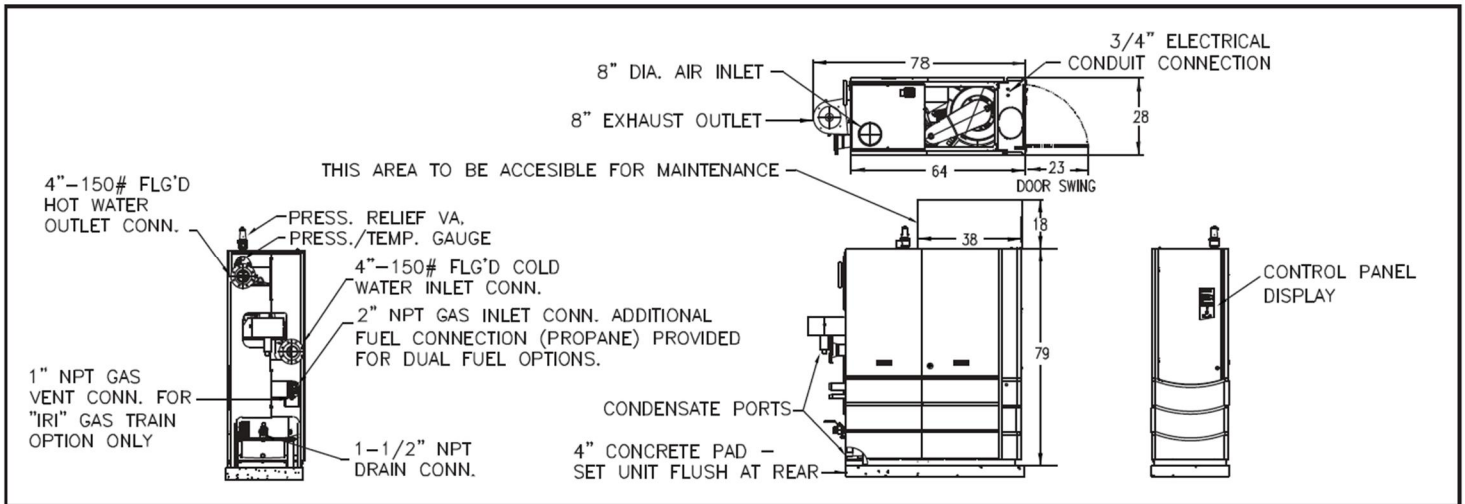
Thermal Efficiency of BMK3.0LN



### FEATURES

- Natural Gas
- (Optional) Dual-Fuel . Natural Gas with Propane Back-Up
- Separate Fuel Connections Provided with Dual Fuel Option
- 15:1 Turndown Ratio
- <30 ppm NOx Emissions at All Firing Rates (when fired with natural gas)
- Direct or Conventional Vent 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
- Sealed Combustion Capable
- Ventless Supply Gas Regulator
- UL, CUL, for Alcove Installation on Combustible Flooring

## DIMENSIONS



## RATINGS AND DIMENSIONS

# Units	Model (a)	Mbh Input (b)	Mbh Output (b) (c)	Width (1)	Depth	Height	Weight (wet)
One (1)	BMK-3.0LN	3,000 mbh	2,610mbh – 2,883mbh	2'4"	5'4"	6'7"	2,580 lbs.
Two (2)	BMK-3.0LN-2	6,000 mbh	5,220mbh – 5,766mbh	6'8"	5'4"	6'7"	5,160 lbs.
Three (3)	BMK-3.0LN-3	9,000 mbh	7,830mbh – 8,649mbh	11'0"	5'4"	6'7"	7,740 lbs.
Four (4)	BMK-3.0LN-4	12,000 mbh	10,440mbh – 11,532mbh	15'4"	5'4"	6'7"	10,320 lbs.
Five (5)	BMK-3.0LN-5	15,000 mbh	13,050mbh – 14,415mbh	19'8"	5'4"	6'7"	12,900 lbs.
Six (6)	BMK-3.0LN-6	18,000 mbh	15,660mbh – 17,298mbh	24'0"	5'4"	6'7"	15,480 lbs.
Seven (7)	BMK-3.0LN-7	21,000 mbh	18,270mbh – 20,181mbh	28'4"	5'4"	6'7"	18,060 lbs.
Eight (8)	BMK-3.0LN-8	24,000 mbh	20,880mbh – 23,064mbh	32'8"	5'4"	6'7"	20,640 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.

## SPECIFICATIONS

BTU Input ..... 3,000,000 BTU/H\*  
 Min. Output @ Full Input ..... 2,610,000 -2,883,000 BTU/H\*\*  
 ASME Working Pressure ..... 160 PSIG  
 Electrical Options .... 208-230/3/60 20 Amp (11 Amp FLA) 5-wire  
 ..... 460/3/60 15 Amp (5 Amp FLA) 4-wire  
 Gas Requirements ..... 2 psi Maximum  
 Standard Unit. FM Gas Train ..... 3.5" W.C. Min. @ Full Load  
 Standard Unit. IRI Gas Train ..... 4.0" W.C. Min. @ Full Load  
 Dual Fuel. FM Gas Train. Nat. Gas .. 5.7" W.C. Min. @ Full Load  
 Dual Fuel. FM Gas Train. Propane ... 3.5" W.C. Min. @ Full Load  
 Dual Fuel. IRI Gas Train. Nat. Gas ... 6.5" W.C. Min. @ Full Load  
 Dual Fuel. IRI Gas Train. Propane .... 3.5" W.C. Min. @ Full Load

Vent Size ..... 8" Diameter  
 Water Connections..... 4" Flanged 150 lb. ANSI  
 Gas Connection ..... 2" NPT  
 Min./Max. Water Flow ..... 35 GPM / 350 GPM  
 Water Pressure Drop ..... 5.5 PSIG @ 258 GPM  
 Water Volume ..... 49 Gallons  
 Control Range ..... 50°F to 190°F  
 NOx Emissions ..... 30 ppm at All Firing Rates  
 Standard Listings & Approvals..... UL, CUL, CSD-1, ASME  
 Gas Train Options..... FM Compliant or Factory Installed IRI  
 Weight, Installed ..... 2,170 lbs. (dry) 2,580 lbs. (wet)

\* Up to 2000qAltitude

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

Represented By:



WATER HEATERS • BOILERS • PARTS & ACCESSORIES

Specifications subject to change.  
 Consult website or contact AERCO.  
 BMK3.0 Revised 1/13/2011 NJ

AERCO INTERNATIONAL, INC. ~ 159 PARIS AVE.  
 NORTHVALE, N.J. 07647-0128 ~ (201) 768-2400 ~ FAX 201-768-7789  
 www.aerco.com