



MODEL BMK-3.0LN GWB

TECHNICAL DATA SHEET

AERCO Low NOx Benchmark Gas Fired Hot Water Boiler System

The AERCO Benchmark 3.0 Low NOx (BMK 3.0LN) 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.

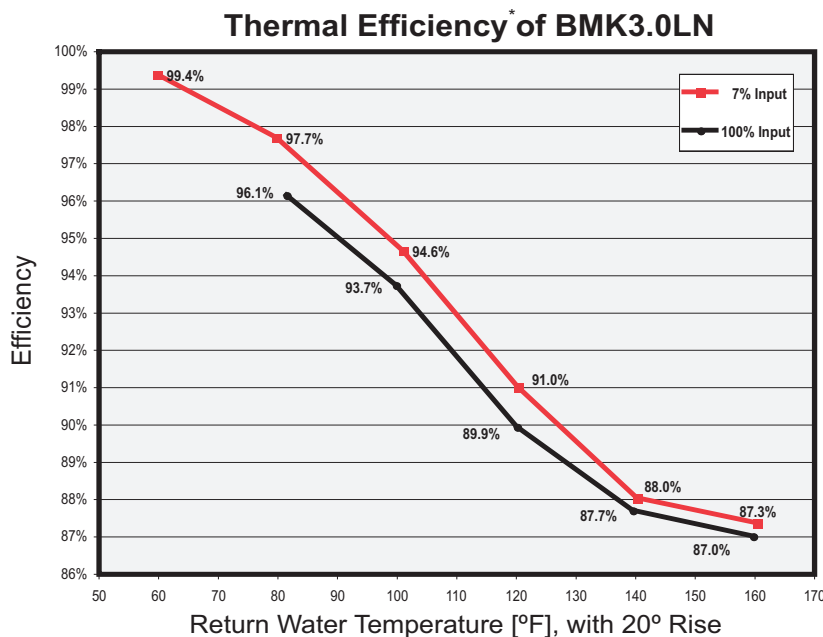
To minimize emissions, the BMK 3.0LN is fitted with a low NOx burner whose emissions will consistently measure <30 ppm of NOx corrected to 3% excess oxygen at all firing rates. The fully modulating burner also maintains AERCO standards for energy efficiency, longevity, reliability and construction quality.

The BMK 3.0LN 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 are being 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. The initial boundary tests indicate that efficiency up to 99.4% can be achieved when the unit operates at its lowest firing rate (7% input) with 60°F inlet water temperature. Even at full fire (100% input), the BMK3.0LN delivers exceptional efficiency.



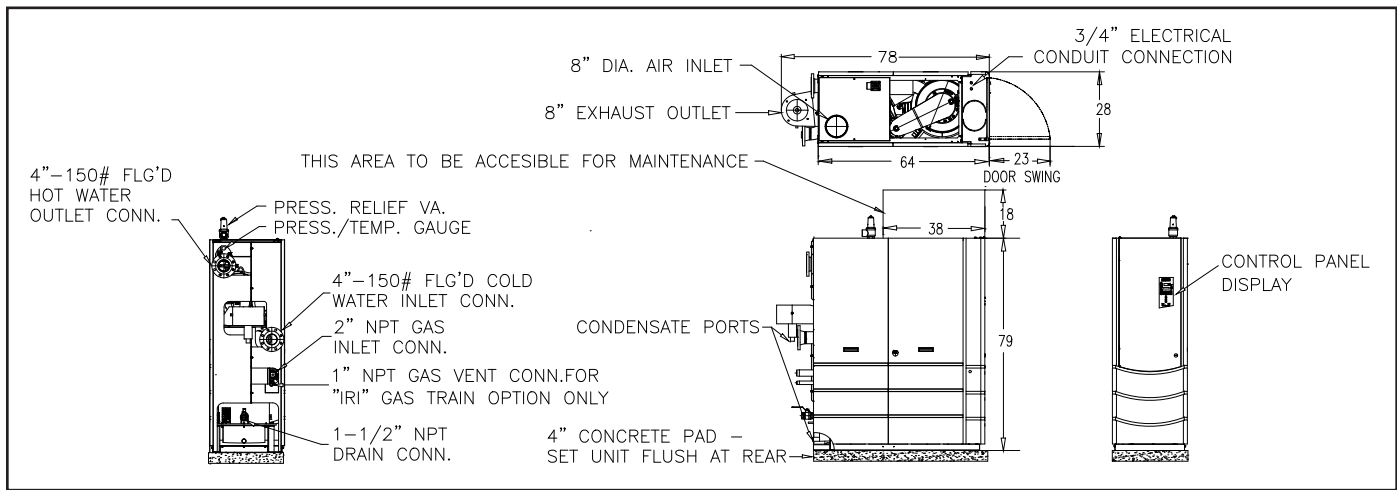
* Preliminary data points. Publication of final curves pending comprehensive testing, review and confirmation by Underwriters Laboratories.

BMK 3.0LN Features

- Natural Gas
- 15:1 Turndown Ratio
- <30 ppm NOx Emissions at all Firing Rates
- Direct or Conventional Vent Capabilities
- AL29-4C Vent Materials Required per UL 1738
- Quiet Operation Throughout Firing Range
- Internal Low Water Cutoff (Manual Reset)
- Compact Footprint (79"H x 28"W x 64"D)
- Precise Temperature Control $\pm 2^\circ\text{F}$
- Sealed Combustion Capable
- Ventless Supply Gas Regulator
- UL, CUL for Alcove Installation on Combustible Flooring



Dimensions BMK-3.0LN GWB



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 – 2,781mbh | 2'3" | 5'4" | 6'5" | 2,580 lbs. |
| Two (2) | BMK-3.0LN-2 | 6,000 mbh | 5,220mbh – 5,562mbh | 6'7" | 5'4" | 6'5" | 5,160 lbs. |
| Three (3) | BMK-3.0LN-3 | 9,000 mbh | 7,830mbh – 8,343mbh | 11'0" | 5'4" | 6'5" | 7,740 lbs. |
| Four (4) | BMK-3.0LN-4 | 12,000 mbh | 10,440mbh – 11,124mbh | 15'3" | 5'4" | 6'5" | 10,320 lbs. |
| Five (5) | BMK-3.0LN-5 | 15,000 mbh | 13,050mbh – 13,905mbh | 19'7" | 5'4" | 6'5" | 12,900 lbs. |
| Six (6) | BMK-3.0LN-6 | 18,000 mbh | 15,660mbh – 16,686mbh | 24'0" | 5'4" | 6'5" | 15,480 lbs. |
| Seven (7) | BMK-3.0LN-7 | 21,000 mbh | 18,270mbh – 19,467mbh | 28'3" | 5'4" | 6'5" | 18,060 lbs. |
| Eight (8) | BMK-3.0LN-8 | 24,000 mbh | 20,880mbh – 22,248mbh | 32'7" | 5'4" | 6'5" | 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.

BMK-3.0LN Specifications

BTU Input3,000,000 BTU/H*
 Net Output @ Full Input2,610,000 – 2,883,000 BTU/H**
 ASME Working Pressure160 PSIG
 Electrical Options208-230/3/60 20 Amp (11 Amp FLA)
460/3/60 15 Amp (5 Amp FLA)
 Gas Requirements4" W.C. Minimum @ Full Load
2 psi Maximum
 Vent Size8" Diameter
 Water Connections4" Flanged 150 lb. ANSI
 Gas Connection.....2" NPT
 Min./Max. Water Flow0 GPM/350 GPM***
 Water Pressure Drop.....5.5 PSIG @ 258 GPM

Water Volume49 Gallons
 Control Range50°F to 190°F
 NOx Emissions<30 ppm at All Firing Rates
 Standard Listings & ApprovalsUL, CUL, CSD-1, ASME
 Gas Train Options.....FM Compliant or Factory Installed IRI
 Weight, Installed2,170 lbs. (dry) 2,580 lbs. (wet)

* Up to 2000' Altitude

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

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

Specifications subject to change.

Consult website or AERCO.

BMK-3.0LN 2/07 5M

New Doc 2/07

