



### Benchmark 3000 Condensing Hydronic Boilers

The AERCO Benchmark 3000 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 BMK3000 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.

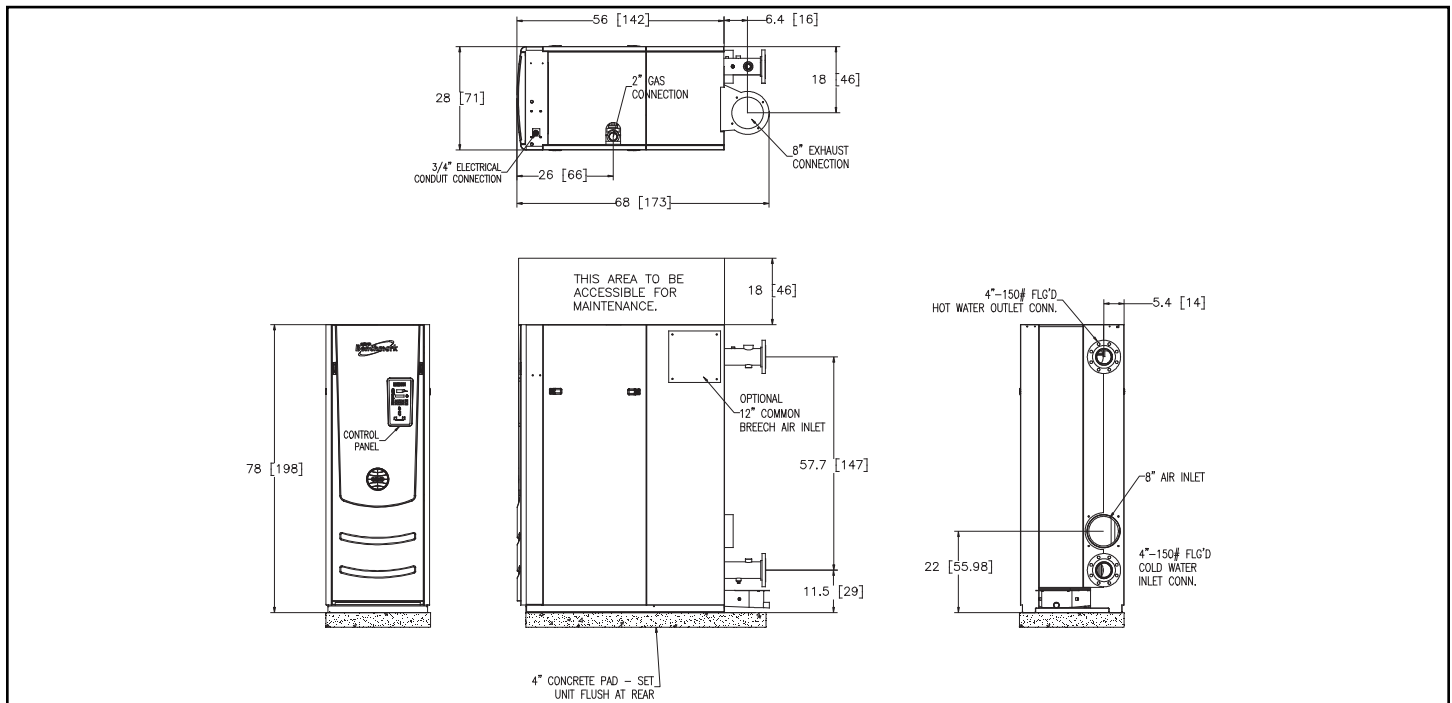
The BMK3000 comes standard with AERCO's Patent Pending, Oxygen Level (O<sub>2</sub>) monitoring system. This monitoring system, designed to display the O<sub>2</sub> level directly on the unit in real time, can also be remotely monitored via Modbus giving the customer the ability to measure the emissions level and fuel economy of the boiler without traditional combustion calibration devices.

The BMK3000 can be used as an individual unit 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.

### FEATURES:

- Natural Gas
- 15:1 Turndown Ratio (7%)
- Oxygen Level (O<sub>2</sub>) Monitoring (optional)
- Stainless Steel Fire Tube heat exchanger
- Capable of variable primary flow Installations
- NOx Emissions 30 ppm or less @ all firing rates
- Compact Footprint (78"H x 28"W x 56"D)
- Precise Temperature Control
- Sealed Combustion Capable
- Easy Open Access for Service
- Acceptable vent materials AL29-4C, Polypropylene
- Reliable Quiet Operation
- Controls Options
  - Constant Setpoint
  - Indoor/ Outdoor Reset
  - Remote Setpoint
  - 4-20mA signal or ModBus

## DIMENSIONS:



## RATINGS AND DIMENSIONS:

Model	MBH Input (a)	MBH Output (a) (b)	AHRI Efficiency 80 to 180 F	Turndown	Width	Depth	Height	Water Volume (gal)	Weight (dry) lbs.	Weight (wet) lbs.
BMK3000	3000	2610mbh-2880mbh	93.5%	15:1	2'4"	4'8"	6'6"	80	2,170	2,580

(a) Altitude below 5000'. Apply altitude correction factor above 5000'.

(b) Output dependent upon application – see efficiency curves

## SPECIFICATIONS:

ASME Working Pressure.....160 PSIG  
 Electrical Options.....200-240V/3/60 FLA 10A  
 .....380-480V/3/60 FLA 5A  
 Gas Requirements ..... 14" W.C Maximum  
Nat. Gas or Propane Only  
 FM Gas Train .....4.0" W.C. Min.@ Full Load  
 DBB (IRI) Gas Train ..... 4.5" W.C. Min.@ Full Load  
Dual Fuel  
 FM Gas Train - Nat. Gas.....8.5" W.C. Min @ Full Fire  
 FM Gas Train - Propane .....4.0"W.C. Min @ Full Fire  
 DDB (IRI) Gas Train - Nat. Gas...9.0" W.C. Min @ Full Fire  
 DDB (IRI) Gas Train - Propane .. 4.5" W.C. min @ Full Fire

Water Connections .....4" Flanged 150lb ANSI  
 Vent/ Air Intake Connections ..... 8 Inch  
 Communications Protocol .....MODbus  
 Gas Connection ..... 2" NPT  
 Min./Max. Water Flow .....25 GPM / 375 GPM  
 Water Pressure Drop ..... 3.0 PSIG @ 261 GPM  
 Control Range .....50°F to 190°F  
 Ambient Temperature ..... 0°F to 130°F  
 Standard Listings & Approvals  
 ..... UL, CUL, CSD-1, ASME  
 Gas Train Options.....FM Compliant or  
 Factory Installed DBB (IRI)

\*Up to 5000' Altitude

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

Represented By:

Specifications subject to change without prior notice.  
 Consult website or contact AERCO.  
 BMK3000 09/2012 NY



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