

## Technical Data Sheet

# Benchmark® Platinum 5000 and 6000 Boilers

The AERCO Benchmark Platinum 5000 and 6000 Hot Water Boiler is designed for condensing application in any closed loop hydronic system. It delivers up to 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 Benchmark Platinum 5000/6000 is fitted with a low NO<sub>x</sub> burner whose emissions will consistently measure <20 ppm of NO<sub>x</sub> 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 Benchmark Platinum 5000/6000 models come standard with AERCO's patented AERtrim system, an innovative O<sub>2</sub> -trim system for condensing boilers, built on the Benchmark's original O<sub>2</sub> monitoring system. This system will self-adjust and maintain air-fuel ratios at optimum levels for peak efficiency, low emissions and maximum uptime reliability in event of any site condition changes (air density, gas pressure, BTU content, etc.) which can be detrimental to efficiency, stability and reliability. Oxygen levels can be directly displayed on the unit in real time or be remotely monitored via Modbus or OnAER, giving our customers the ability to measure the emissions level and fuel economy of the boiler without traditional combustion calibration devices.

The Benchmark 5000/6000 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. The Benchmark 5000/6000 features built-in Boiler Sequencing Technology (BST) capable of sequencing 2-8 boilers. For heating plants greater than 8 boilers, AERCO's ACS (AERCO Control System) provides the right solution. The Benchmark 5000/6000 can be easily integrated with a facility-wide Energy Management or Building Automation System. Furthermore, Benchmark® Platinum 5000/6000 models come standard with dual return connections for optimal application flexibility and seasonal efficiency gains of up to 7%. Additionally BMK Platinum 5000/6000 boilers come onAER ready and with a 5-year subscription of onAER standard.

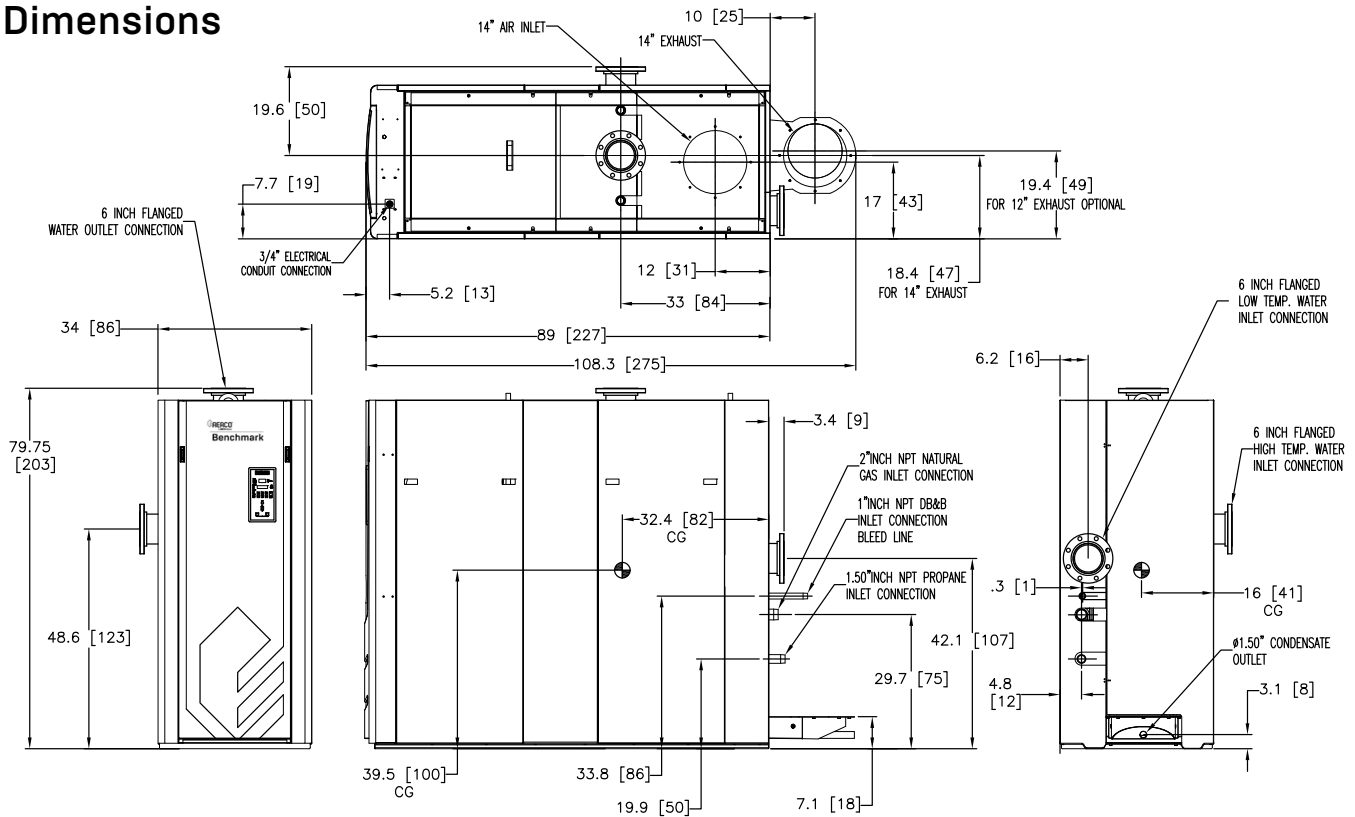


BMK Platinum 6000 certified only

## Features

- Natural Gas or Dual Fuel (Propane)
- Up to 15:1 Turndown Ratio (7%)
- AERtrim System Standard
- Stainless Steel Fire Tube heat exchanger
- Capable of variable primary flow Installations
- Capable of NO<sub>x</sub> Emissions 9 ppm or less @ all firing rates (BMK6000 Requires 14" Venting)
- Compact Footprint (79"H x 34"W x 108"D)
- Precise Temperature Control
- Ducted Combustion Air Capable
- Dual return water connections
- Easy Open Access for Service
- Acceptable vent materials AL29-4C or Polypropylene
- Optional 12" Flue Venting
- Reliable Quiet Operation
- Controls Options: Constant Setpoint, Indoor/Outdoor Reset, Remote Setpoint, 4-20mA signal or Modbus
- 15 year heat exchanger warranty

## Dimensions



## Ratings and Dimensions

Model	MBH Input	MBH Output	Efficiency 80° to 180°F	Turn-down	Width	Depth	Height	Water Volume(gal)	Weight (dry) lbs.	Weight (wet) lbs.	Shipping Weight
BMK5000	5000	4725	94.5% Preliminary	12.5:1	2'10"	9'	6'7"	110	3,000	3,920	3,800
BMK6000	6000	5670	94.5%	15:1	2'10"	9'	6'7"	110	3,000	3,920	3,800

## Specifications

ASME Working Pressure: 80 PSIG or 150 PSIG

Electrical Options: 208/3/60 30 AMP,  
460/3/60 20 AMP, 575/3/60 20 AMP

### Gas Requirements

#### Natural Gas

FM Gas Train: 14" W.C. Min. @ Full Load

DBB (IRI) Gas Train: 14" W.C. Min. @ Full Load

#### Dual Fuel

FM Gas Train - Nat Gas: 14" W.C. Min. @ Full Fire

FM Gas Train - Propane: 14" W.C. Min. @ Full Fire

Water Connections: 6" Flanged 150lb ANSI

Vent/ Air Intake Connections: 12/14"

Communications Protocol: Modbus

Gas Connection: 2" NPT

Min./Max. Water Flow: 75 gpm / 700 gpm

Water Pressure Drop: 4.0 psig@ 570 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, DBB



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