

Technical Data Sheet

Benchmark NX

High Efficiency Boilers 399-500 MBH

The AERCO Benchmark[®] NX hot water boiler is designed for condensing applications in any closed loop hydronic system. It delivers burner modulation to match energy input directly to fluctuating system. No other product packs as much capacity into such a small footprint.

Benchmark NX Features:

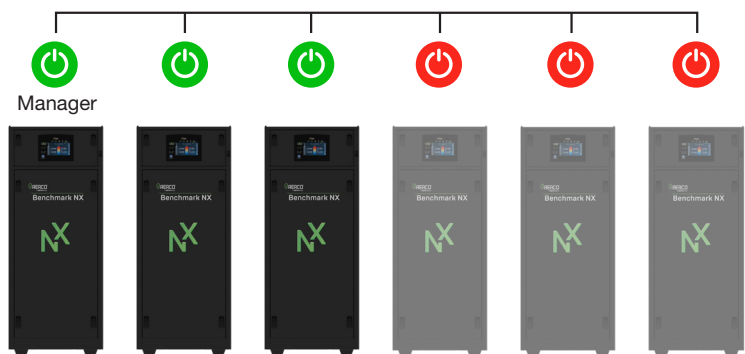
- Edge[®] Controller
- BACnet IP and MSTP ready
- Integrated cascade controls, up to 16 boilers
- Reserve/Backup boiler contact
- Industry-leading warranty

Energy Efficient

To minimize emissions, Benchmark NX boilers are fitted with a low NOx burner whose emissions will meet the most stringent NOx and CO requirements. The fully modulating burner also maintains AERCO standards for energy efficiency, longevity, reliability and construction quality.

Application and Plant Design

Benchmark NX boilers can be used as individual units or in modular arrangements. In addition to controlling the boiler according to a constant set point, indoor/outdoor reset schedule, 0-10V or 4-20mA signal, one or more units can be integrated via AERCO's built-in Boiler Sequencing Technology (BST). The Benchmark NX with Edge Controller has integrated solutions for multiple Building Management system protocols, including BACnet IP and MSTP.



Features

- Natural gas, propane
- Up to 10:1 turndown ratio (10%)
- Stainless steel fire tube heat exchanger
- Capable of variable primary flow Installations
- NOx emissions capable of 20 PPM or less @ all firing rates
- Compact footprint, light weight
- Ducted combustion air capable
- Easy open access for service
- Acceptable vent materials: UL 1738/ ULC-S636 certified stainless steel, Polypropylene, cPVC, PVC
- Reliable quiet operation
- 10 year heat exchanger warranty

Edge Controller

- Precise temperature control
- On-board boiler sequencing technology (BST)
- BST minimum number of open valves
- Integrated BACnet IP, BACnet MS/TP
- Variable speed pump control
- Simplifies commissioning
- Controls options:
 - Constant setpoint
 - Indoor/outdoor reset
 - Remote setpoint
 - 0-10V, 4-20mA signal, BACnet

Specifications

	Benchmark NX	
	399	500
Boiler Category	ASME Section IV	
Gas Connections (NPT)	1"	
Max. Gas Pressure	14"	
Min. Gas Pressure	4"	
Max. Allowed Working Pressure	160 PSIG	
Electrical Requirements 120V/1PH/60Hz	4.5 FLA	
Water Connection (NPT)	2"	
Min. Water Flow (GPM)	19 GPM	23 GPM
Max. Water Flow (GPM)	75 GPM	91 GPM
Water Volume Gallons	13.5 gal	12.4 gal
Turndown Ratio	Up to 10:1	
Vent/Air Intake Connections	4"	
Vent Materials	UL 1738/ ULC-S636 certified stainless steel, Polypropylene, cPVC, PVC	
Type of Gas	Natural Gas or Propane	
NOx Emissions <20 ppm Capability	✓	
Standard Listings & Approvals	ASME	
Gas Train	FM Compliant	
Weight (dry) lbs.	376	405
Shipping Weight lbs.	476	505

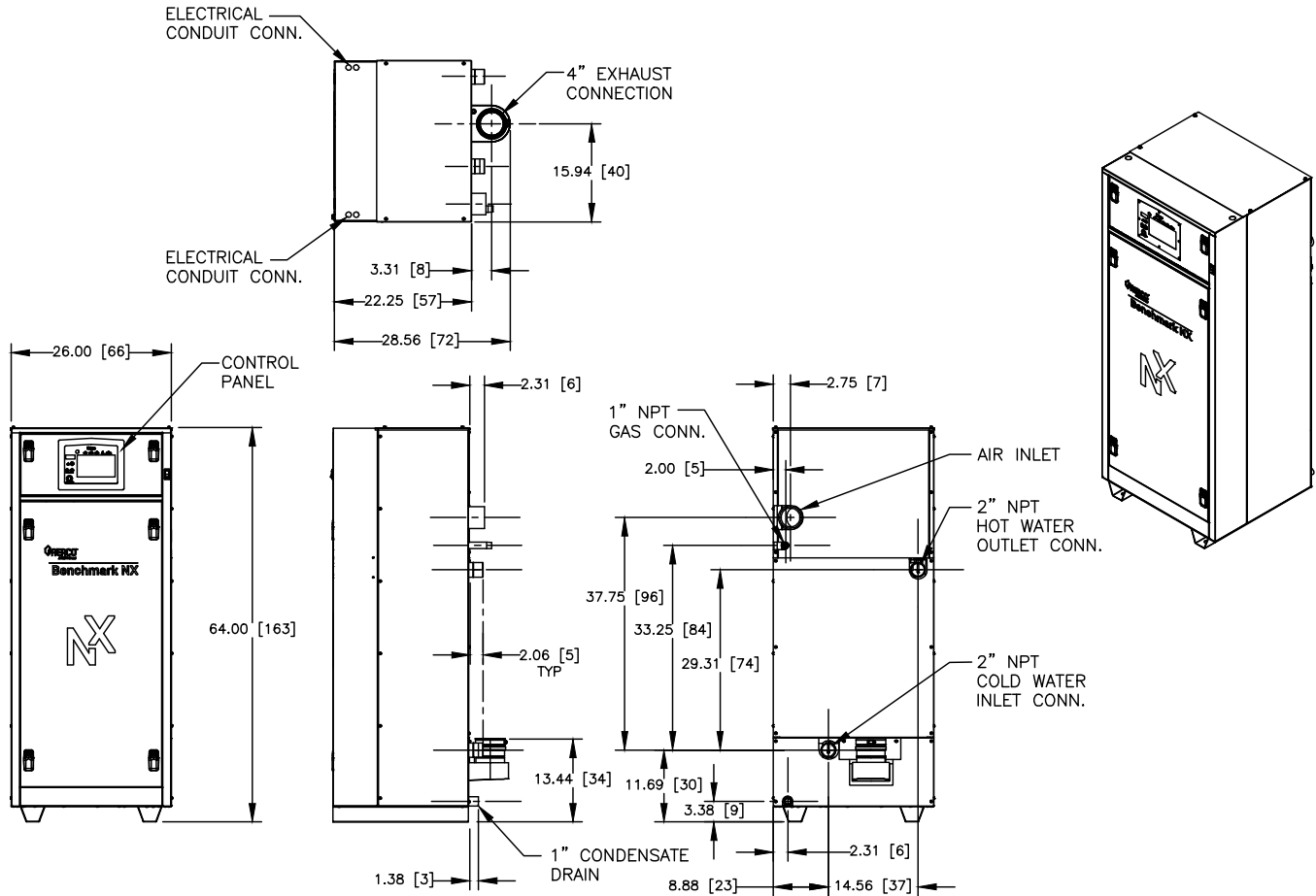
All specifications in the table above are preliminary and subject to change

Certified Ratings

BMK	Max Input MBH	Efficiency Range
399	399	87-97%
500	500	87-97.4%

Dimensions

In inch (cm)



Heating and Hot Water Solutions

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