



# H<sub>x</sub>O

## Tankless Instantaneous Water Heater

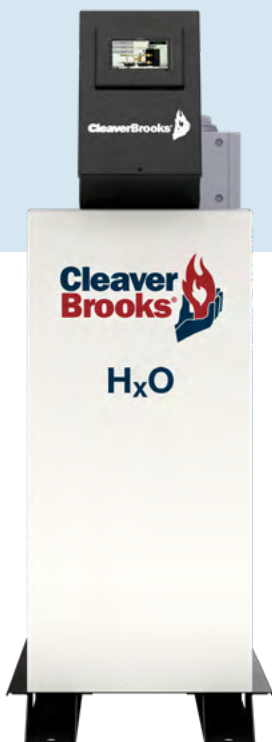
Up to 10,000 MBH



# Innovative Design Maximizes Efficiency

## Simplified Design

The H<sub>x</sub>O is designed to provide instantaneous domestic hot water supply to your building without the need for additional fuel-fired or electric heating equipment. By utilizing your new or existing hot water heating loop, the H<sub>x</sub>O will provide on-demand water for your system.



### All of the heat exchangers used in H<sub>x</sub>O models are:

- » ASME-certified
- » CRN-approved
- » NSF 372-certified
- » Stainless steel brazed-plate design

## Easy to Install

- » Intelligent, integrated controls that are simple to operate
- » Compact footprint
- » Eliminates requirement for hot water storage tanks

## Ease of Maintenance

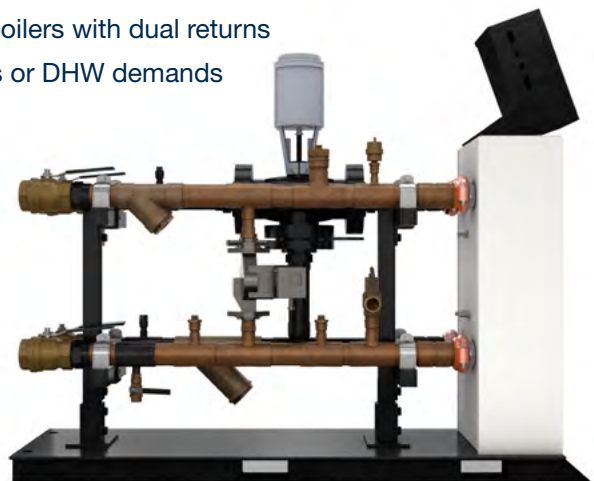
- » Brazed-plate design eliminates gaskets and other spare parts
- » Groove-lock connections standard for easy installation and removal of heat exchanger

## Efficient Operation

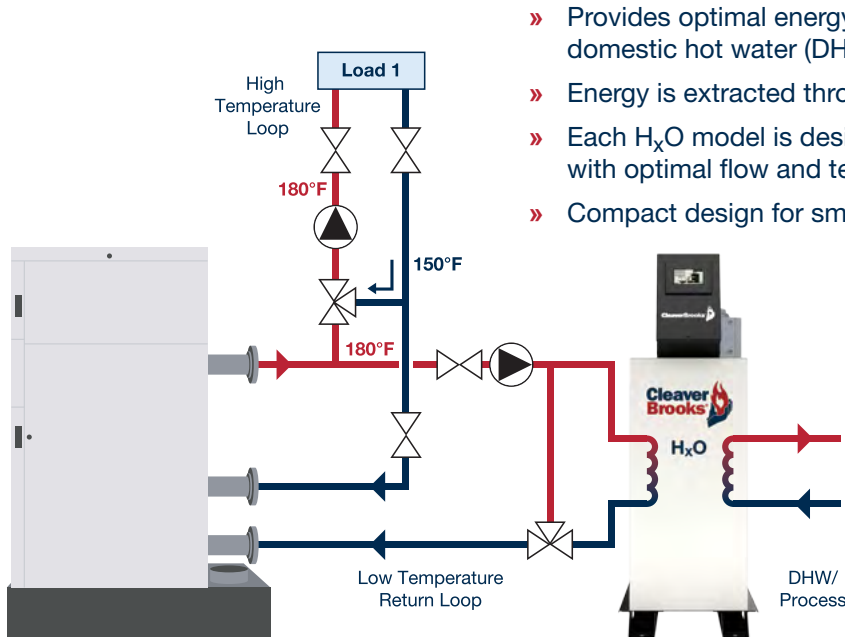
- » Combine with high-efficiency condensing boilers
- » Ideal to utilize with ClearFire®-CE boilers with dual returns
- » Instantaneous response to process or DHW demands

## Standard Features

- » Anti-scaling circulator
- » Pressure relief valve
- » Temperature and pressure valve
- » 3-way modulating valve
- » Manual isolation valves
- » Full-color touchscreen controller with PID set point control

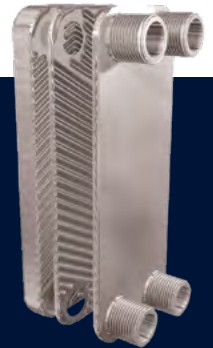


# Heating Support for Hot Water Heating Loads



- » Provides optimal energy transfer between a boiler loop and a domestic hot water (DHW) or process water loop
- » Energy is extracted through a compact and efficient heat exchanger
- » Each H<sub>x</sub>O model is designed for a specific application with optimal flow and temperature ranges
- » Compact design for smaller boiler room footprint

## Brazed Plate Heat Exchanger



- » The Brazed Plate Heat Exchanger consists of corrugated stainless steel plates that improve heat transfer by increasing turbulence
- » Double-wall plate design is optimal to prevent cross-contamination of fluid streams

## Industry-Leading Control Solutions

### Effective, Intelligent Control Strategy

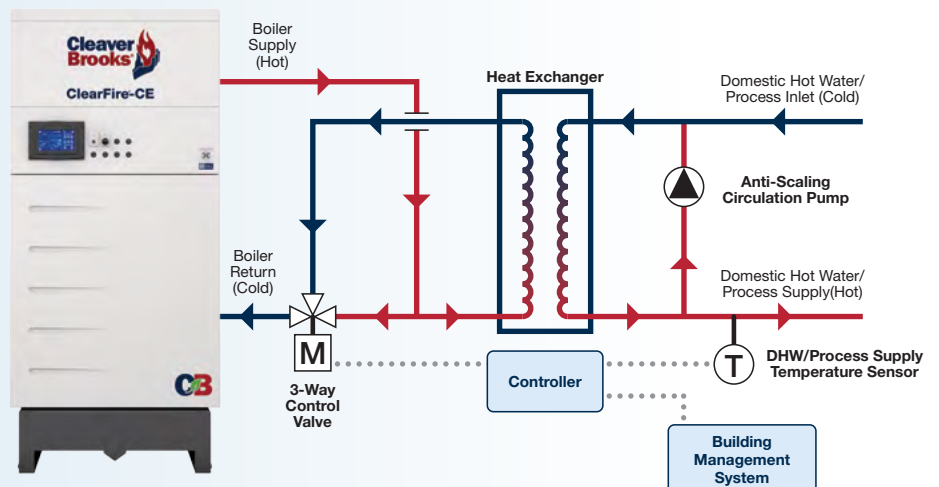
- » Color touchscreen display with built-in I/O, networking and data-logging capability
- » Continually monitors the outlet temperature of the process water to regulate the amount of heat transfer
- » Capable of remote control and monitoring
- » IntelliFLO-enabled control maintains DHW water outlet temperature within  $\pm 2^\circ$  F of set point during abrupt load changes



Full color touchscreen controller

### Robust Control Package

- » PID temperature set point control
- » Color, digital-display touchscreen
- » 3-way modulating valve-actuator
- » Alarms
- » Circulating pump optional
- » Remote monitoring available



# Dimensions and Ratings

## Design Requirements

Maximum Temperature: 250 °F

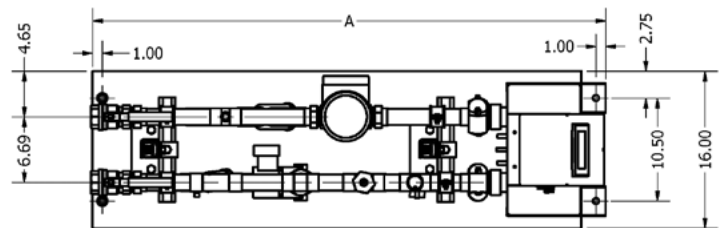
Maximum Pressure Process Side: 150 psi

Maximum Pressure Boiler Side: 160 psi

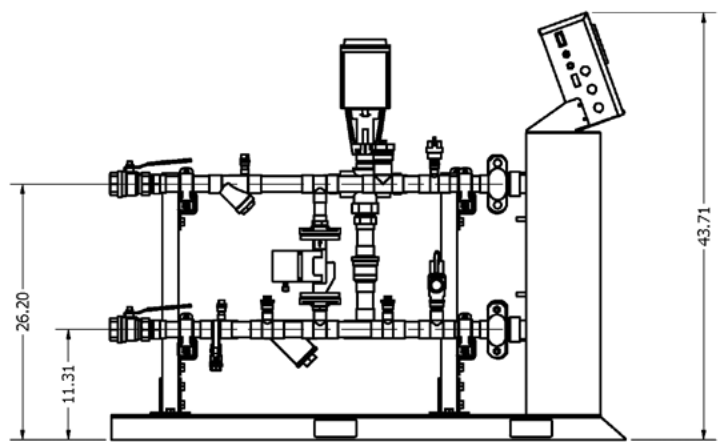
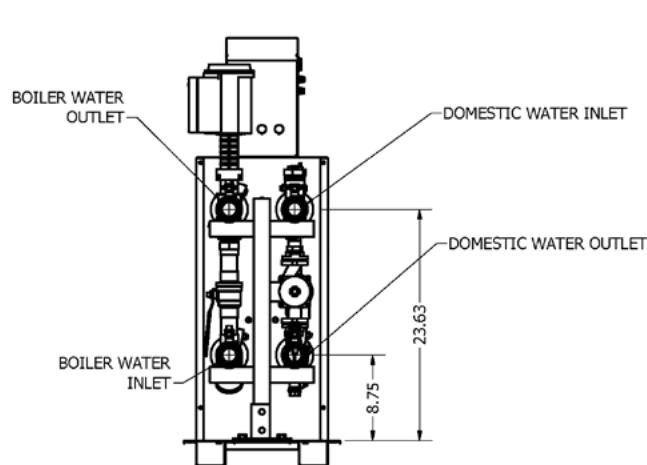
## Electrical Requirements

Operating Voltage: 120V/1Ph/60Hz

Control Circuit MOCP: 4 Ampere



PLAN



ELEVATION

Model <sup>1)</sup>	Depth (Dimension "A")	Connections	Dry Weight (lbs)	Operating Weight (lbs)	Heat Exchanger Surface Area (sq/ft)
S1	52.5"	1.5" FNPT	330	360	22.4
S2	52.5"	1.5" FNPT	340	380	33.6
S3	52.5"	2" FNPT	350	415	44.8
S4	52.5"	2" FNPT	360	430	56.0
S5	52.5"	2" FNPT	370	455	67.2
S6	58.3"	2" FNPT	380	480	78.5
D1	52.5"	1.5" FNPT	350	380	23.2
D2	52.5"	1.5" FNPT	385	440	46.4
D3	52.5"	2" FNPT	400	470	58.0
D4	58.25"	2" FNPT	435	535	81.2
D5	58.25"	2" FNPT	470	560	104.4
D6	58.25"	2" FNPT	505	660	127.6
D7	63.57"	2.5" FNPT	600	780	150.8
D8	63.57"	2.5" FNPT	650	850	174.1
D9	63.57"	2.5" FNPT	700	950	193.3

<sup>1)</sup> "S" Model denotes single wall; "D" Model denotes double wall



Cleaver-Brooks delivers the most efficient and compact hydronic and water heating solutions available. Packaged solutions are engineered to your application.

# Options and Accessories

## Packaged Boiler Room Solutions

- » Engineered and skidded boiler systems with H<sub>x</sub>O water heater
- » Multiple H<sub>x</sub>O skidded solution
- » High pressure capable on process side upon request

## Piping for Domestic Hot Water Applications

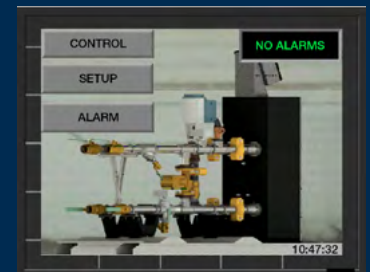
Copper piping is standard for process/DHW side, black carbon steel pipe is standard for boiler side. Capable with glycol applications.

Options for:

- » Copper piping (available for process side only or both)
- » Stainless steel piping (available for process side)

## IntelliFLO

The optional accessory IntelliFLO proactively adjusts the actuator upon sensing rapid DHW or process load changes to prevent temperature spikes.



## ProtoAir Gateway Protocol Translator

The Cleaver-Brooks multi-protocol communications gateway supports integration with a variety of BMS languages, including BACnet, Metasys, and Modbus. The ProtoAir Gateway comes with pre-configured mapping for all Cleaver-Brooks control platforms.



## Circulating Pumps

Boiler-side or process/DHW pumps available upon request





## The power of total integration.

The **Power of Total Integration** is how Cleaver-Brooks delivers the world's broadest range of integrated, sustainable boiler plant solutions. In addition to our products, this includes our global representative and service network, training resources, and trusted expertise that add significant value to your Cleaver-Brooks investment.



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