CleaverBrooks®

Electric Boilers

Steam Models To 330 HP

A Cleaver-Brooks Sustainable Solution

Decarbonizing Energy One Electric Boiler at a Time

Electric boilers are one of many products that Cleaver-Brooks offers to help meet your sustainability goals of decarbonization, emissions reduction and energy efficiency. Because they utilize electricity as a fuel source, these compact, economical units deliver maximum output with no local emissions.

Helping to achieve sustainability goals, our electric boiler solutions can:

- Reduce or eliminate dependency on fossil fuels up to 100%
- Leverage renewable energy sources to increase process efficiency to nearly 100%
- Eliminate 17.7 metric tons annual CO_2 emissions per boiler horse power (24/7/365)

Our Electric Boilers meet the strict performance and sustainability criteria required to earn the Cleaver-Brooks Sustainability Seal. Find out more at cleaverbrooks.com/sustainability

Features / Advantages

For areas affected by allocations or interruptions of natural gas and costly oil supplies, electric boilers provide a dependable source of steam. They offer a clean alternative to fossil fuels, allowing users to take advantage of lower energy rates during daily or seasonal off-peak periods.

- **Compact Design** – Simple installation and ideal for quick replacement of existing fuel-fired boilers.
- **No Combustion Equipment Required** – Reduces installation costs by eliminating the need for gas/oil piping, combustion air supply and exhaust stack.
- **Quiet Operation** – No noise from a combustion fan and burner.
- **Ease of Maintenance** – The absence of higher-maintenance combustion equipment and the use of solid-state control devices reduce the complexity and number of moving parts.
- **Flexible Fuel Supply** – Electricity is readily available from several sources, including renewables such as wind, solar and hydroelectric power.
- **Zero Local Emissions** – Electric boilers are 100% emissions-free and well suited for decarbonization or site-emissions-reduction projects.
- **High Efficiency** – Electric boilers are nearly 100% efficient at all operating points.
- **Full Modulation and Optional Infinite Turndown** – Only use the amount of electrical energy required for system demand.

Cleaver-Brooks stands behind its equipment

2-year comprehensive parts warranty
5-year electrical heating element warranty
10-year pressure vessel warranty

Why Choose our Electric Boilers?

- **Durable and Reliable** – Electric boilers use many heavy-duty and individually replaceable electric resistance heating elements. Units are resistant to poor water quality and can continue operating even if one heating element fails.
- **Quality and Consistent Manufacturing** – Each packaged unit is quality tested in an ISO-certified shop and certified in accordance with stringent (c)UL standards.
- **Packaged Steam System** – Available as part of a Cleaver-Brooks skidded boiler room package for ease of installation.

Markets

- **Healthcare**
- **Food Processing**
- **Laundry**
- **School**
- **Apartments**
- **Chemical**
- **Government**
- **Mining**
- **Utilities**
- **Breweries/Distilleries**
- **Pulp/Paper**

Switch to electric boilers during hours when electricity is cheaper than fuel.

Rely on a quick response to swinging loads and variable production cycles.

Count on consistent product temperature control and operational reliability.

Compact, Quiet and Highly Efficient

Standard Features

Boiler

- ASME code vessel
- UL listed
- Integral steel frame
- Incoloy 800 heating elements
- Fiberglass insulation, 2”
- ASME pressure relief valves
- Heavy-duty steel jacket
- Forklift skid base

Trim

- Proportional pressure control
- Manual reset high pressure
- Main low-water cutoff
- Auxiliary low-water cutoff
- Pilot light: Control power on, low water, high pressure and step status

Electrical Equipment

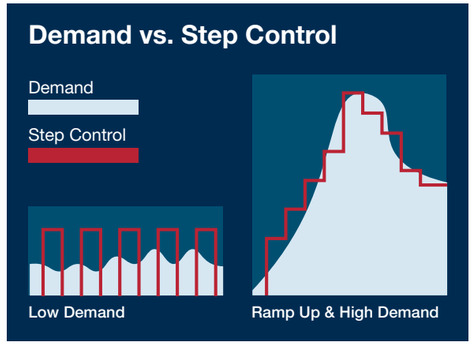
- 200,000 AIC-rated fuses
- Contactors rated at 500,000 cycles
- Control circuit step-down transformer
- Customer connection terminal strip
- Primary connection lugs

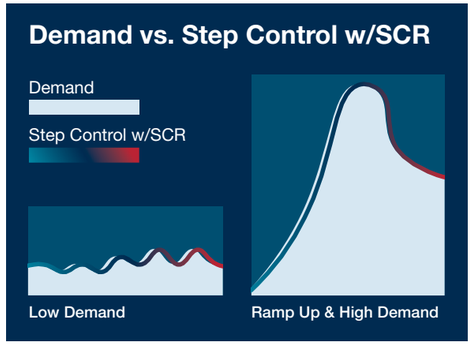
Intuitive, Intelligent Control

Our electric boilers feature an intuitive touchscreen control that has a built-in ability to control multiple boilers, enable time of day boiler scheduling to avoid demand charges, and improve system operating efficiency with outside air reset. The control can be configured for advanced SCR integration to achieve enhanced boiler modulating control and increased heater longevity. It also is IoT compatible to enable remote monitoring and offers control and trending through building management system integration.

Proven SCR/Thyristor Control Strategy for Infinite Turndown

Using the same concept as variable speed drive technology, SCR control is an option to improve electric boiler step control scheme. The SCR allows true linear-modulation control with infinite turndown, provides precise boiler pressure control, reduced electrical contactor cycling, reduced power surges, and allows for higher operational efficiencies during hot standby.





Dimensions and Ratings

S-Model

- Small footprint
- 12 to 2250 kW
- Up to 7,875 lb/hr

	Boiler Output (lb/hr) (*212 °F @ 480 volts)	Width (IN)	Depth (IN)	Height (IN)	Steam Outlet Size (125 psig)
S-120	168	38	38	58	1.25" NPT
S-161	280	44	42	69	1.25" NPT
S-162	560	44	42	69	2" NPT
S-200	840	46	47	76	2" NPT
S-241	1120	43	58	78	2" NPT
S-242	1680	43	58	78	2" NPT
S-302	2520	49	66	94	3" 300# flanged
S-361	3024	56	72	79	4" 300# flanged
S-362	3780	56	78	94	4" 300# flanged
S-421	4536	62	84	82	4" 300# flanged
S-422	4914	62	84	94	4" 300# flanged
S-480	6804	72	90	104	6" 300# flanged

CR-Model

- Vertical Steam Boiler
- 12 to 563 kW
- Up to 1,969 lb/hr
- Identical to Model S but has integral condensate receiver and pump

	Boiler Output (lb/hr) (*212 °F @ 480 volts)	Width (IN)	Depth (IN)	Height (IN)	Steam Outlet Size (125 psig)
CR-120	168	40	46	58	1.25" NPT
CR-161	280	44	50	69	1.25" NPT
CR-162	560	44	50	69	2" NPT
CR-200	840	48	54	76	2" NPT
CR-241	1120	43	58	78	2" NPT
CR-242	1680	43	58	78	2" NPT

HSB-Model

- Horizontal Steam Boiler
- 1560 to 3375 kW
- Up to 11,813 lb/hr

	Boiler Output (lb/hr) (*212 °F @ 480 volts)	Width (IN)	Depth (IN)	Height (IN)	Steam Outlet Size (125 psig)
HSB-423	6720	155	70	72	4" 300# flanged
HSB-424	8400	172	72	72	6" 300# flanged
HSB-425	10080	189	72	72	6" 300# flanged

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.

Click or scan the QR code with a smartphone camera to access Electric and Electrode resources

CleaverBrooks®

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