

## Econoburn Technical Datasheet



### Models

EBW-100

EBW-150

EBW-200

EBW-300

EBW-500

EBW-150-0

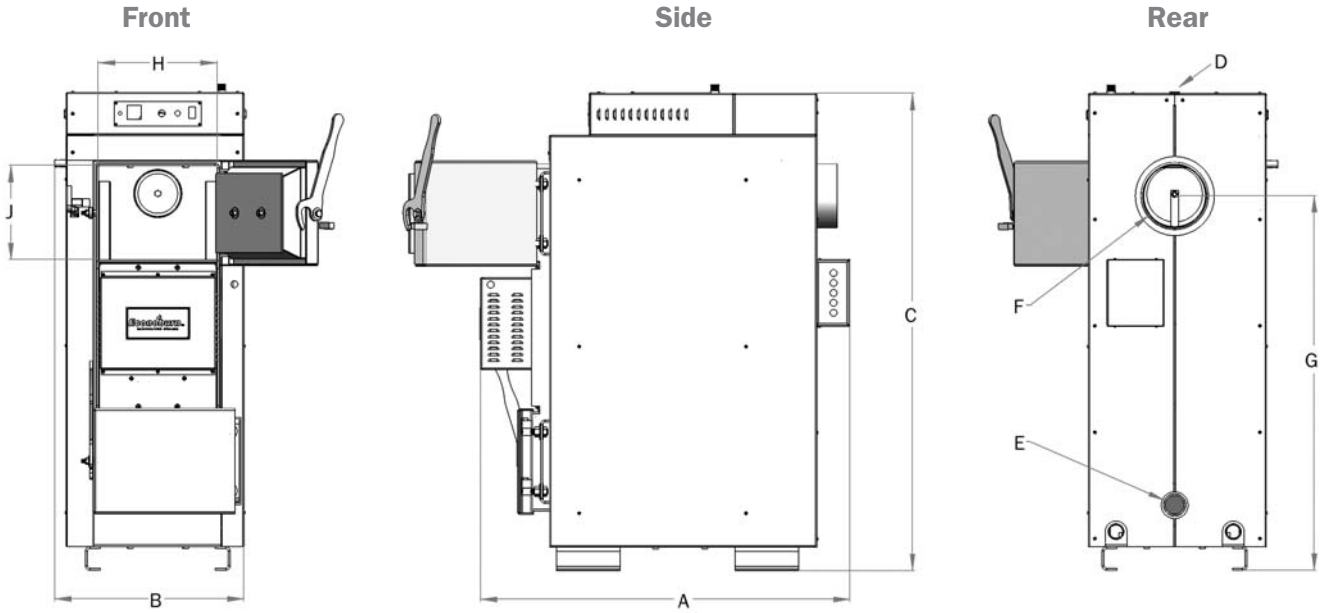
EBW-200-0

### Econoburn Highlights

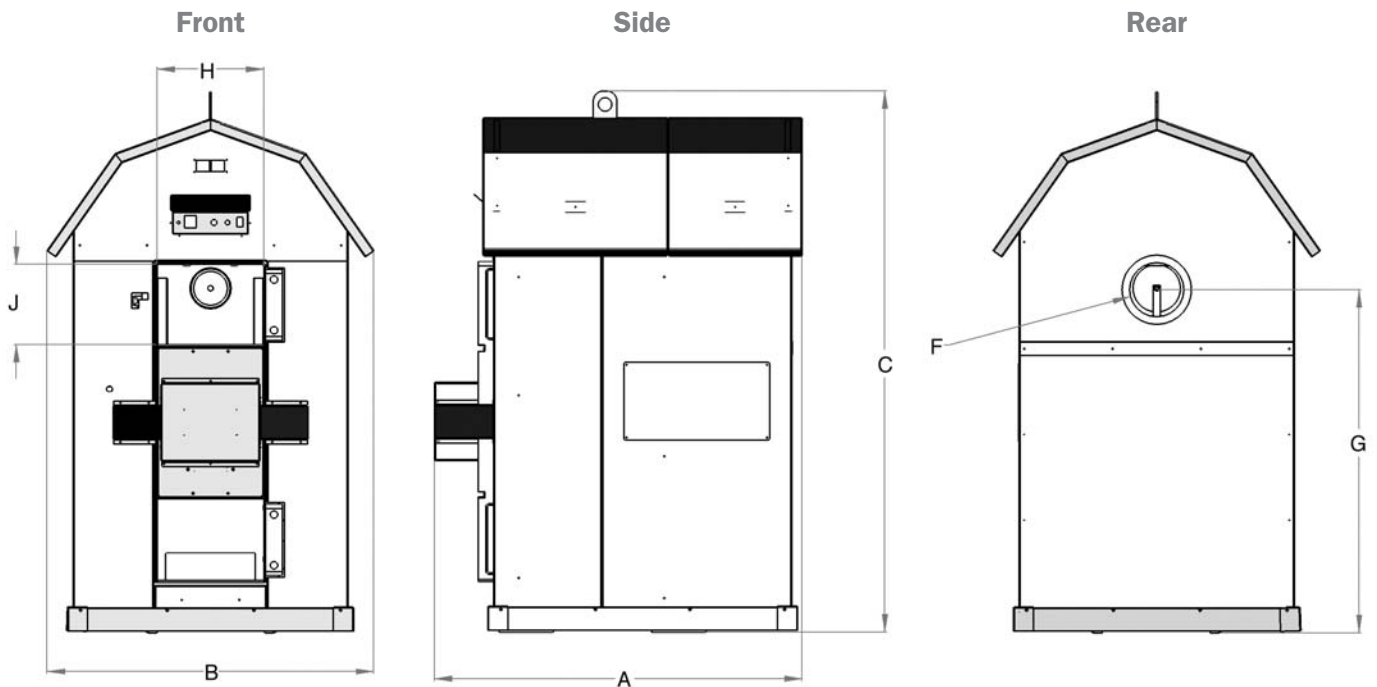
- Saves homeowners money... burns HALF the wood!
- Integrates seamlessly with any existing hot water boiler or furnace.
- Achieves an amazing 87% thermal efficiency!
- Burns cleanly with minimal residual smoke, creosote, or ash.
- Constructed with double-welded 1/4" ASME grade 36 carbon steel.
- Available in sizes from 100,000 to 500,000 BTU.
- Covered by the industry's best 25-year warranty!

**Econoburn**  
High-Efficiency Wood-Fired Boilers

### Indoor Boiler



### Outdoor Boiler

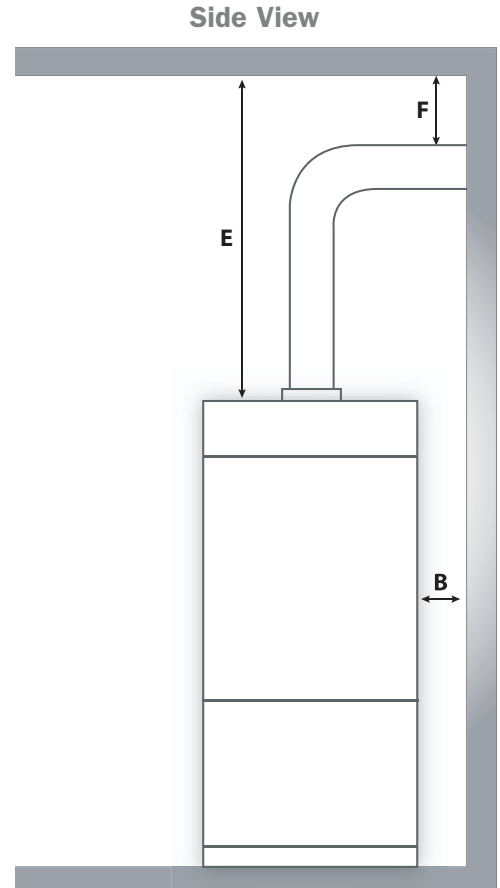
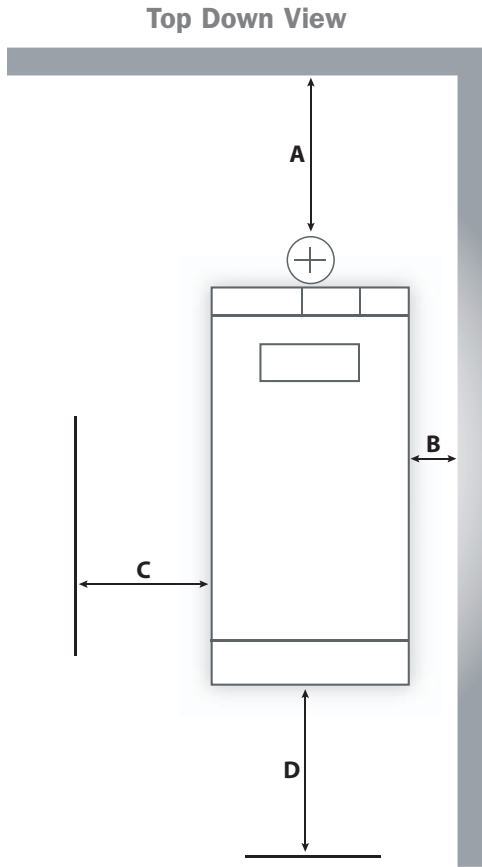


# Specifications

Boiler Model	Key	EBW-100	EBW-150	EBW-200	EBW-300	EBW-500	EBW-150-O	EBW-200-O
Design Application		Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor	Outdoor
BTU Output		100,000	150,000	200,000	300,000	500,000	150,000	200,000
<b>Boiler Dimensions</b>								
Depth	A	47" / 119.4cm	47" / 119.4cm	47" / 119.4cm	50" / 127cm	63" / 160cm	54.25" / 137.8cm	54.25" / 137.8cm
Width	B	25" / 63.5cm	26" / 66cm	30" / 76.2cm	36" / 91.4cm	41" / 104.1cm	48.4" / 122.9cm	48.4" / 122.9cm
Height	C	60.25" / 153cm	63.75" / 161.9cm	64.25" / 163.2cm	70" / 177.8cm	76" / 193cm	80" / 203.2cm	80.5" / 204.5cm
Weight Empty		1,560Lbs/708kg	1,670 Lbs/757kg	1,980 Lbs/898 kg	2,515 Lbs/1,141kg	3,405Lbs/1,544kg	~1,800Lbs/816 kg	~2,100 Lbs/953 kg
<b>Firebox Dimensions</b>								
Depth		23" / 58.4cm	23" / 58.4cm	23" / 58.4cm	26" / 66cm	32" / 81.3cm	23" / 58.4cm	23" / 58.4cm
Width		15" / 38.1cm	16" / 40.6cm	21" / 53.3cm	24" / 61cm	27" / 68.6cm	16" / 40.6cm	21" / 53.3cm
Height		25" / 63.5cm	28" / 71.1cm	29" / 73.7cm	33" / 83.8cm	39" / 99.1cm	28" / 71.1cm	29" / 73.7cm
Maximum Log length		21" / 53.3cm	21" / 53.3cm	21" / 53.3cm	33" / 83.8cm	33" / 83.8cm	21" / 53.3cm	21" / 53.3cm
Firebox Door Length	J	12" / 30.5cm	12" / 30.5cm	12" / 30.5cm	12" / 30.5cm	12" / 30.5cm	12" / 30.5cm	12" / 30.5cm
Firebox Door Height	H	15" / 38.1cm	15.75" / 40cm	20.5" / 52.1cm	23.5" / 59.7cm	27.5" / 69.9cm	15.75" / 40cm	20.5" / 52.1cm
<b>Piping Data</b>								
Water Volume		30 Gal / 114 L	37 Gal / 140 L	42 Gal / 159 L	79 Gal / 299 L	95 Gal / 360 L	37 Gal / 140 L	42 Gal / 159 L
Supply Pipe (female connection)	D	2"	2"	2"	2.5"	4"	2"	2"
Return Pipe (female connection)	E	2"	2"	2"	2.5"	4"	2"	2"
Min Boiler Loop Size		1-1/4"	1-1/4"	1-1/2"	2"	3"	1-1/4"	1-1/2"
Fill / Drain Valve Size		3/8"	1-1/4"	1-1/2"	1-1/2"	1-1/2"	1-1/4"	1-1/2"
<b>Flue Dimensions</b>								
Flue Outlet Diameter	F	8"	8"	8"	8"	12"	8"	8"
Height to Center of Flue	G	47.25"	50.75"	51.25"	57"	61.5"	50.75"	51.25"
<b>Operating Data</b>								
Max Operating Temperature		210° F / 99° C						
Max Operating Pressure		30 PSI / 207 kPa						
Output Temperature (range)		170° F - 200° F / 77° C - 93° C						
Specified Fuel		Wood (recommended moisture content: 15-22%)						
Minimum Draft Required		-0.02 to -0.06 inch WC / -0.005 kPa to -0.015 kPa						
Flue Gas Temperature		280° F - 400° F / 138° C - 204° C						
<b>Electrical Data</b>								
Boiler Power Requirement		110 volt, 15 amp						
Electrical Consumption (watts)		100	175	175	175	200	175	175
Aquastat Overheat Setting		220° F / 104° C						
Electrical Consumption		< 5 amps						

Specifications subject to change without notice.

## Clearance to Combustibles



### Clearances to Combustibles

Measurement	Key	Recommend Service	Safety	Notes
Backwall to Appliance	A	24"	18"	Minimum distance to allow clearance for the flue pipe
Sidewall to Appliance (R)	B	18"	0"	Minimum distance
Sidewall to Appliance (L)	C	24"	0"	Minimum distance on left side to allow clearance for the turbulator arm
Front of Appliance	D	48"	16"	Required distance for cleaning the boiler
Ceiling to Appliance	E	28"	16"	Required distance for cleaning the boiler
Combustibles to Pipe	F	18"	18"	Minimum distance

### Choose the Boiler Size

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We recommend performing a detailed heat load calculation to use in calculation to determine boiler size. It is also useful to calculate the capacity of the heat supply system (commonly forced air ducts or baseboard) to ensure adequate distribution. Important note: square foot-based load calculations are often not as accurate as a structure's heat load and can vary widely depending on the building's age and construction.

### Connect to the Chimney

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It is critical to provide the Econoburn boiler with a properly functioning chimney. Indeed, a good chimney ensures that the boiler will benefit from a continuous draft and will prevent combustion products from spilling into the building. The boiler must be connected to either a tile-lined masonry chimney or a Type UL 103 HT (ULC S629 in Canada) all-fuel chimney with a height conforming to local codes. The minimum flue diameter is equal to the flue collar size (or 6" for the EBW-100). For maximum boiler performance, we recommend a draft of -0.02 to -0.05 inches of water column.

### Ensure Appropriate Access to Combustion Air

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Like any combustion appliance, the Econoburn boiler consumes a small amount of air as it operates. Accordingly, for every 100,000 BTU input of all combustion appliances found within a connected space, provide for combustion air equal to any combination of the following: 1) 50 sq inches of free area opening to the outside and/or 2) 6,667 cubic feet of continuous interior space. For the indoor model, provide combustion air that is at least 30 degrees (do not connect the boiler directly to outside air). The outdoor model comes standard with an air intake system designed to pre-heat its combustion air. Do not store flammable liquids or materials (including gasoline, propane, paint, bleach, etc.) in the same room as the boiler.

### Place the Boiler

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The Econoburn indoor boiler must be protected from the weather. Install the boiler in a weather-tight, protected space on a non-combustible floor base. Although the boiler is approved for 0" clearance to combustibles on the sides and 18" on the back, it is best to allow for a service area equal to 18" on the right side, 24" on the left side, and 24" in the back. To allow room for loading and servicing, allow for 48" free space in front of the boiler.

## **Install the Power Supply**

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The Econoburn requires a 120 VAC, 60 hertz power supply. The electrical connection should come from a 15 amp dedicated circuit breaker. Install an emergency switch within easy reach of the boiler. Please follow all electrical codes.

## **pH and Anti-Freeze Concerns**

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System pH should be between 8.0-8.6. Anti-freeze may be utilized, but may impact the heat transfer efficiency. Use only anti-freeze approved for heating systems.

## **Design and System Plumbing**

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Since Econoburn boilers operate as pressurized systems (closed loop), they do not require a plate heat exchanger. Copper, iron, or oxygen-barrier plastic tubing are all acceptable piping materials. Insulation is a must for any piping exposed to unconditioned spaces (outdoors or indoors). The boiler output and the length of piping will determine the required piping size.



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