



Wood Gun™

Residential

Wood Gasification Boilers

With Convenient Liquid Fuel Back-up

20
Year
Warranty



Manufactured
over
30 Years

Standard Log Wood

Alternate Heating Systems, Inc.

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www.woodgun.com



ASME H-Stamp
Certified Boiler



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The **Wood Gun™** wood gasification boiler by **Alternate Heating Systems** utilizes the most advanced technology in wood burning and is perhaps the most efficient wood burning device on the market today. This uncompromising multi-fuel system is ideal for any residential application where wood or wood by-products are used as fuel. The **AHS Wood Gun™** is available in residential sizes ranging from 100,000 to 250,000 BTU's.

All units are factory wired, assembled, and tested before being shipped. The optional smoke exhaust hood illustrated below removes smoke and water vapor that may be released when the load door is opened.



The firebox of each **Wood Gun™** can accommodate wood sizes ranging from unsplit logs to particles. Typically, the large firebox need only be loaded 2-3 times daily. An automated fuel feed option is also available. The **Wood Gun™** will handle wood of relatively high moisture content, freeing you from curing a 12-18 month supply of wood (30% moisture or less is preferred).



Weekly cleaning allows for optimal performance. The easy access front and rear inspection doors along with included ash scoop and rake make cleaning fast and convenient.



A high velocity draft fan moves air through the wood allowing for easy cold start up. After the gasification process begins this air movement produces intense flames and very high temperatures in the gasification tunnel. In turn The air flows through the heat exchanger cleaning as it passes through.





The **Wood Gun™** boilers can be fitted with either fuel oil, natural gas or LP gas back-up. The Riello fuel oil burner will allow you the option of

automatic back-up. This allows you to save money by burning a renewable fuel source and the convenience of burning oil. The oil back-up system is rated over 84% efficient. With an efficiency rating that rivals top of the line oil units you can't go wrong.

Stainless Steel Construction

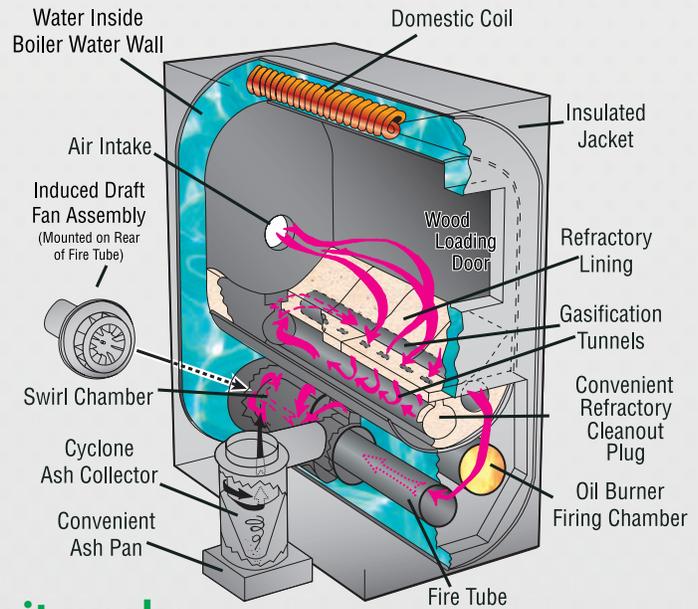
All Wood Gun boilers use ¼" thick Type 304 stainless steel in the construction of the firebox and door frames. We use Type 304 stainless steel for its unsurpassed quality and longevity. Some of our stainless steel boilers have been in service for over 20 years and they show virtually no sign of deterioration.



This is exhaust emitting from the **Wood Gun™** gasification boiler. What you see is not smoke but the moisture crystallizing due to cold temperature. (notice the vapor trail ends within a small distance)

Smoke

The **Wood Gun™** wood gasification boiler, when maintained properly, produces no visible smoke and creosote formation in the chimney is prevented.



How it works

Wood gas is produced by applying heat to wood, a process called pyrolysis. The wood gas is drawn through the bottom of the firebox and into our uniquely designed refractory by an induction fan. The gases are combined with oxygen and combusted in the refractory. The superheated gases pass through the interconnected refractory tunnels and in to our uniquely designed swirl chamber. This is where the bulk of heat exchange takes place. The superheated refractory then continues to gasify the wood remaining in the firebox. After combustion the residual ash is combined with high velocity air flow to scrub the heat exchanger preventing any build up. This process allows us to maintain an unparalleled consistency in heat exchange. Most ash exits the unit and is collected in the cyclone ash separator for fast and easy removal.

The **Wood Gun™** cycles on and off much like an oil or gas fired boiler. During the off cycle, fuel is not consumed because oxygen is not present in the combustion chamber. With the large superheated refractory mass, re-ignition of the fuel occurs automatically when a drop in water temperature signals the need for heat. (Automatic re-ignition will take place up to 5 to 6 hours depending on boiler size.)

During the off cycle, wood gas inside the firebox condenses on the inner walls forming a solid that will eventually fall off. This combines with the remaining fuel thus adding energy that in many other boilers goes up the chimney.

Stack Temperature

Exhaust stack temperature is an indicator of transfer efficiency. During combustion, temperatures of around 2000° Fahrenheit can be obtained. Amazingly, our exhaust stack temperature ranges from about 260-300° Fahrenheit. This stack temperature is unheard of in the industry. The **Alternate Heating Systems Wood Gun™** is truly the pinnacle of wood fueled heating devices.



Wood Gun™ E Series Specifications

	E100	E140	E180	E250
BTU/Hour Max	150,000	200,000	230,000	350,000
BTU 8 Hour Avg Output*	100,000	140,000	180,000	250,000
Water Capacity	60 gallons	80 gallons	90 gallons	140 gallons
Fire Box Capacity	6.5 ft ³	10 ft ³	14 ft ³	22 ft ³
Fire Box Length	28"	32"	32"	48"
Standard Door Opening	14" x 14"	14" x 14"	14" x 14"	14" x 14"
Height	58"	64"	66"	74"
Width (cyclone removed)	26"	26"	31"	31"
Depth	44"	48"	48"	66"
Flue Size	6"	6"	6"	8"
Weight (w/o gas/oil)	1,400 lbs	1,650 lbs	2,100 lbs	3,000 lbs
Typical Heating Capacity**	3,000 ft ²	4,000 ft ²	5,000 ft ²	9,000 ft ²

*Based on loading firebox with seasoned hardwood

**Subject to building design/construction

Specifications subject to change without notice

Optional Wood Gun™ Accessories

- Domestic hot water coil
- Draft cycle timer - extends reignition period for times of low demand
- Low water cutoff - safety shutdown if water level drops
- Low temperature shutdown - fan shutdown if fire goes out
- Smoke exhaust hood - 485 CFM
- Fuel oil backup package available with either manual or automatic switchover
- Canister pool heater - carbon steel or stainless steel
- ASME and UL Certified on request

Limited Warranty

Alternate Heating Systems, Inc. boilers and furnaces are warranted against defects in materials and workmanship for the following periods:

- Boiler Vessel - 20 years
- All other components both manufactured by Alternate Heating Systems, Inc. and purchased from vendors will vary in length of warranty from 30 days to 1 year.

A copy of the complete warranty text, detailing coverage, limitations, warranty claim procedure and state law rights is available from Alternate Heating Systems, Inc.

ASME Certification

The American Society of Mechanical Engineers (www.asme.org) certification is available on any of our boiler lines for an additional charge. This certification assures that the pressure vessel has been designed and constructed in accordance with the ASME Code. This certification is required for all commercial installations. The certification is also required for some residential installations depending upon local codes - it is up to the homeowner to determine the need for an ASME certification on any boiler purchased.

UL Certification

UL certification is also available on all Wood Gun boilers for an additional charge. This certification assures that the boiler complies to UL 2523 Standards. Some insurance companies may require this certification and it is the responsibility of the homeowner to determine the need for a UL certification on any boiler purchased.



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Alternate Heating Systems manufactures alternative fuel burning heating equipment and sells (primarily direct) throughout the US, Canada, and internationally. Call us today to schedule a tour of our facilities, visit our showroom, and see a working demonstration of any boiler models.

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Time is the best friend of Truth.