



# Wood Gun™ COMMERCIAL

Indoor Wood Boiler with Liquid Fuel Back-up Option



**20 YEAR  
WARRANTY**

Manufactured for over  
**30 YEARS**



## Alternate Heating Systems

2395 Little Egypt Rd • Harrisonville, PA 17228  
(717) 987-0099 • [sales@woodgun.com](mailto:sales@woodgun.com)  
[www.woodgun.com](http://www.woodgun.com)



ASME H-Stamp  
Certified Boiler  
Option



**Wood Gun™**



# Wood Gun™

## Wood Gun™ COMMERCIAL

Indoor Wood Boiler with Liquid  
Fuel Back-up Option



The **Wood Gun™** wood gasification boiler by **Alternate Heating Systems** is perhaps the most efficient wood burning device on the market today. This uncompromising multi-fuel system is ideal for any residential application where conventional log wood is used as fuel. The **AHS Wood Gun's** can heat buildings as small as 900 square feet up to 50,000 sq ft, subject to building design and construction. The Wood Gun uses a heavy duty ASME approved water vessel. The Wood Gun is a pressureized boiler meaning there is no maintenance to be done to the water in the system. We guarantee no corrosion to the water vessel. The Wood Gun does not need thermal storage!



The firebox of each **Wood Gun™** can accommodate wood sizes ranging from unsplit logs to full rounds. Typically, the large firebox need only be loaded 2-3 times daily. The **Wood Gun™** will handle wood of relatively high moisture content, as high as 35% moisture, 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, speed 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 it as it passes through.





**Wood Gun™** boilers can be fitted with either fuel oil, natural gas or LP gas back-up (non-UL version only). 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

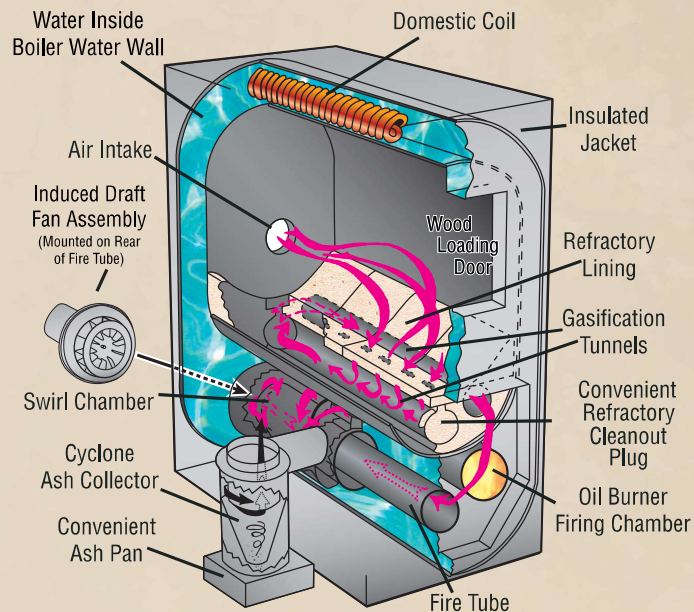
Wood Gun boilers use 1/4" thick Type 304 stainless steel in the construction of the firebox, heat exchanger and door frames. We use Type 304 stainless steel for its unsurpassed quality and longevity. Our stainless steel boilers show no signs of deterioration, even after well over 20 years of service.



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

## Smoke

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



## How it works

Wood gas is produced by applying high heat to wood in 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 super heated gases pass through the interconnected refractory tunnels and into our uniquely designed swirl chamber. This is where the bulk of heat exchange takes place. Above the heat exchanger, the superheated refractory 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 leads to 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 can take place as long as 4 hours or more after the last firing cycle 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, adding energy that in many other boilers goes up the chimney.

## Stack Temperature

Exhaust stack temperature is one indicator of heat transfer efficiency. During combustion, temperatures of around 2000° Fahrenheit can be obtained. Amazingly, our exhaust stack temperature ranges from about 260-350° Fahrenheit. Firewood stack temperatures this low are almost unheard of in the industry. The **Alternate Heating Systems Wood Gun™** is truly the pinnacle of wood fueled heating devices.





## Wood Gun™ COMMERCIAL Specifications

	E100	E140	E180	E200	E250	E500	E1000
BTU/Hour Max	150,000	200,000	230,000	280,000	350,000	600,000	995,000
BTU 8 Hour Avg Output*	100,000	140,000	180,000	200,000	250,000	500,000	995,000
Oil BTU/Hour	80,000	130,000	160,000	180,000	230,000	500,000	995,000
Water Capacity	60 gallons	80 gallons	80 gallons	100 gallons	140 gallons	210 gallons	435 gallons
Fire Box Capacity	6.5 ft <sup>3</sup>	10 ft <sup>3</sup>	14 ft <sup>3</sup>	16 ft <sup>3</sup>	22 ft <sup>3</sup>	28 ft <sup>3</sup>	61 ft <sup>3</sup>
Fire Box Length	28"	32"	32"	40"	48"	54"	60"
Standard Door Opening	14" x 14"	14" x 14"	14" x 14"	14" x 14"	14" x 14"	18" x 18"	18" x 18"
Height	58"	64"	66"	65"	74"	90"	102"
Width (cyclone removed)	26"	26"	31"	31"	31"	34"	48"
Depth	44"	48"	48"	66"	66"	72"	78"
Flue Size	6"	6"	6"	8"	8"	10"	12"
Weight (w/o oil)	1,400 lbs	1,650 lbs	2,100 lbs	3,000 lbs	3,000 lbs	4,500 lbs.	9,000 lbs.
Typical Heating Capacity**	3,000 ft <sup>2</sup>	4,000 ft <sup>2</sup>	5,000 ft <sup>2</sup>	7,000 ft <sup>2</sup>	9,000 ft <sup>2</sup>	20,000 ft <sup>2</sup>	50,000 ft <sup>2</sup>

\*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 available on request
- Low pressure steam package



## Limited Warranty

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

- Boiler Vessel - 20 years
- All other components - 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.

## ASME Certification

The American Society of Mechanical Engineers ([www.asme.org](http://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.

*As advertised, the burn length varied from 8 to 12 hours depending on temperature. This meant that it was not necessary to load the boiler in the middle of the night, a welcome change. Also, the absence of any requirement for heat storage tanks meant that the WoodGun fit into the foot print of the boiler I replaced. Besides avoiding the cost of tanks and extra plumbing, it allowed the use of basement space for other important uses.*

*--Christopher Robbins, Vermont*



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[www.woodgun.com](http://www.woodgun.com)

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 our boilers.



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*Time is the best friend of Truth.*