Wood heating



wood boilers and water storage tanks

SmokeLess Heat LLc • 2020 Cornwall Rd • Lebanon , PA 17042 • toll-free 855-389-0083 • www.smokelessheat.com •

Wood Heating has never been easier!

you can SWEEP, REFILL AND LIGHT this boiler



he VEDDLUX boilers built by Värmebaronen are indoor wood boilers that offer very efficient burning in excess of 2000° F, producing a virtually smoke-free operation inside and outside where you and your neighbors can breathe

in 5 minutes

easy. These boilers are truly a **user friendly** wood heating solution!

The VEDDLUX wood **gasification** boilers are **always** combined with **heat storage** tanks, allowing you to burn **the least** amount of wood possible, by **"batch"** burning while still meeting the demand all day even if there isn't an active fire!

WHAT is BATCH BURNING and why WATER STORAGE?

Batch burning is fully burning a load of wood to completion, avoiding idle or smoldering. This requires a hot water storage tank because often the house load only needs a small portion of the full output created by a single load of wood. All the extra heat not used by the home during a burn cycle gets stored and is held in reserve for later heating needs. The boiler operation compares to charging a battery....The *charger* is the boiler and the hot water storage tank is the *battery*. *Charging* or burning is required after the house demand depletes the stored hot water from the previous burn cycle. Heating capability from this type of system extends well beyond the burn cycle.

Fires always run at full output while charging the storage system. Fires that idle or are forced to smolder generate unburned smoke and cause creosote... And are not efficient. Vedolux boilers avoid this senario by running at full output, then after the wood is completly consumed, shut down. The low mass and ample exchange area of these boilers allow for a rapid climb to operating temperatures, usually within 20 minutes of lighting.

Water storage combined with an efficient wood boiler excel in Spring and Fall. Stored heat may last several days from a typical 3.5 hour burn time during weather where you have large temperature swings. For an average winter day the heat demand may require a morning and evening firing. Water storage is essential for efficient wood boiler operation because the nature of wood burning requires a full and complete burn for true clean combustion.



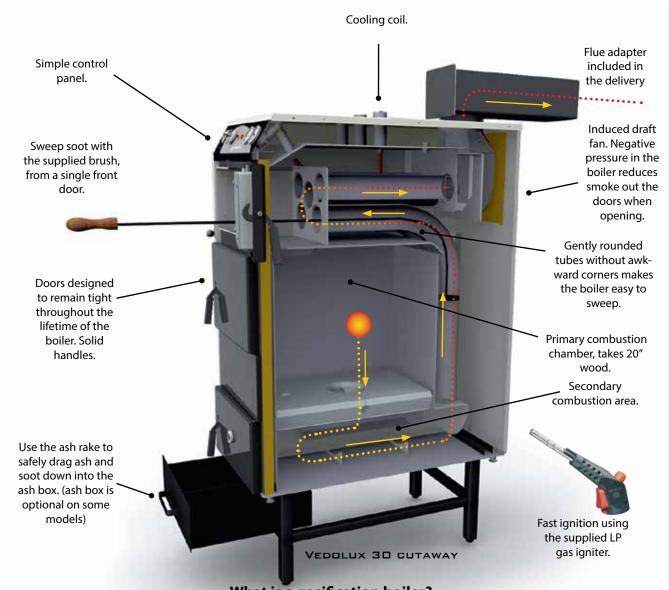
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Dealer opportunities

SmokeLess Heat LLc is the North American importer for

of Sweden.

This is how a **good wood-fired boiler** should be designed



What is a gasification boiler?

"Wood Gasification" boilers create wood smoke in the primary chamber where the wood is loaded. This chamber is generally around 600° F. At these temperatures smoke is released from the wood and is drawn downward into a secondary combustion chamber where this explosive wood gas mixture is combined with additional air and re-combusted at very high temperatures often reaching 2000° F. These high temperatures are then transferred rapidly into the boiler water jacket through the unique curved tube exchanger. Most all the combustible gasses have been consumed by this point leaving mostly CO2 and water vapour. The most notable indicator of effective gasification is the lack of smoke exiting the chimney.

Each Varmebaronen VEDDLUX boiler model shares this **unique curved tube exchanger design,** enabling easy cleaning **from the front** and **speedy ignition** in just a few minutes. The boiler effectively re-burns the gasses within 5 minutes from lighting. Only a **clean boiler** is efficient: soot coating the exchangers causes valuable heat to escape up the chimney. Choose a boiler that makes it easy for you to light and keep clean!

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VEDOLUX 50

EDOLUX 40

INDUCED DRAFT FAN

Three VEDDLUX boiler models offer a wood gasification boiler with an induced draft fan providing the draft. These models work well with chimneys that might not have enough draft for the natural draft boiler. The control is very simple using mechanical thermostats and switches and doesn't use a computer. The BTU output from these models ranges from 100K-185K BTU.

NATURAL DRAFT

Two VEDDLUX boiler models present a wood gasification boiler without the use of fans or electric controls. The natural draft models require a specific size chimney for operation. A good draft is required for the inverse burn. No electric is required for the burn but a pump needs to run to move the hot water to the storage tank. The BTU output from these models ranges from 136K-170K BTU.







VEDOLUX 30

VEDOLUX 37

VEDOLUX 55



LAMBDA CONTROLLED

Three VEDDLUX boiler models showcase a wood gasification boiler with the highest levels of efficiency available to a wood burner. These models have a computerized *lambda* control that drives the boiler airflow automatically. The oxygen sensor monitors the flue gasses throughout the burn and performs draft fan air adjustments in real time to maintain an optimal burn. The BTU output from these models ranges from 120K-220K BTU.