

Burnham®

High Efficiency Condensing Boilers



Proven Reliability,
American-Made
Home Heating Comfort.

Burnham®
by
U.S. Boiler Company

A Family of Condensing Boilers



- ✓ Superior energy savings
- ✓ Quality construction
- ✓ Variety of configurations
- ✓ Energy-saving standard features

■ FOUR great options!

U.S. Boiler Company offers the NEW K2 Firetube, the original K2, the Alpine, and the value-priced X-C boiler. These four condensing boiler models offer an incredibly comprehensive array of sizes and capabilities that are UNMATCHED in the home heating industry. Unsure of which boiler to choose? Simply ask your home heating professional; they will eliminate the guesswork and help you find the best model to fit your needs.



■ A Month of FREE HEAT?

Yes, it may seem unbelievable, but upgrading from a typical 80% efficient boiler to any of U.S. Boiler's condensing boilers can provide about a 15-20% savings in energy, which can equate to a month (or more) of heating fuel costs. What this means to homeowners is that energy savings can be realized during the first year of operation, and EVERY YEAR THEREAFTER.

■ Good for you and the environment

High efficiency home heating benefits you by providing home heating comfort with lower fuel consumption. It also means less emissions, which benefits everyone!

■ Extras INCLUDED

All of these boilers come packed with standard energy saving features, one of which is "Outdoor Reset". By reading input from a sensor located outside the house, these boilers are able to determine what the correct output should be in order to match the heating requirement of the temperature outside. This feature is very useful in the "fringe" seasons of fall and spring, when the temperature outside can fluctuate greatly.



Efficiency, Reliability, Flexibility

■ Combi options for heat AND hot water!

Looking for an all-in-one efficient solution for heat and hot water? U.S. Boiler has combi options available in both versions of the K2 Boiler!



■ Stainless steel heat exchangers for long-term reliability

The optimum material for the heat exchanger on an ultra-high efficiency boiler is stainless steel. The properties of stainless steel enable it to quickly transfer warm, comfortable heat while maintaining the lowest possible operating temperature, and highest efficiency.

■ Tested and Proven

For product reliability, U.S. Boiler Company goes the extra mile. The heat exchanger and combustion system are tested for proper operation. Once the boiler is assembled, it is given a complete final boiler and control test. This assures our customers that the quality and operation of every component, and the boiler as a whole have been proven before it leaves the factory.

■ Natural gas or propane

U.S. Boiler's condensing products are designed to run on either natural gas or liquid propane, offering greater fuel flexibility. A simple adjustment performed by your installer is all that is required to switch fuel sources.

■ American-made

Every Alpine and K2 boiler is assembled in U.S. Boiler Company's manufacturing facility, located in Lancaster, Pennsylvania, U.S.A.

■ FREE 5-year parts warranty

This outstanding protection comes with every residential condensing boiler*, and covers all boiler components for five years from the date of installation at no additional cost. Extended warranties covering parts and labor are available separately. For additional details on extended warranty specifics, please visit www.usboiler.net



Control System Excellence

The exclusive Sage2.2 Boiler Control System used in both the Alpine and K2 was co-developed in partnership with Honeywell, the leader in home comfort controls. The unique functionality and exclusive capabilities of this control was designed by engineers at U.S. Boiler Company, the North American leader in boilers for home heating. This custom control is produced in world-class manufacturing facilities and provide the outstanding quality and reliability synonymous with both industry leaders, U.S. Boiler Company and Honeywell.



*Boiler sizes under 300 MBH and used in residential applications

K2 Boilers

Two different models

What is the difference between the two K2 models? Mainly it's about the type of heat exchanger used. The K2FT uses a "fire tube" heat exchanger, while the K2WT utilizes a "water tube" design. Unsure which one to choose? No worries...simply consult with your professional heating contractor, he will assist you in finding which model is best for your home.

High efficiency, high performance

With AFUEs up to 95%, both K2 models do an outstanding job of establishing a balance between high efficiency and high value. This is achieved by mating the proven and reliable performance of a high efficiency heat exchanger with the Sage2.2 control system. The impressive list of high-value standard features that come with each of these boilers adds to the overall savings that they can provide

Wall mounted boilers

The space-saving low depth profile of the wall-mounted K2 boiler offers tremendous flexibility in tight installation spaces.

Many sizes available

K2FT boilers are available in (6) sizes, and K2WT boilers are available in (5). This range of size means that there's a K2 boiler available for virtually any size requirement.

High performance...even at high altitude!

When your home is 2,000 feet (or more) above sea level, you typically wind up buying a boiler that is larger and more expensive than it needs to be. Why? Because most boilers lose a percentage of heating capacity at higher altitudes. K2 boilers do this at a substantially lower rate than competitive models. In fact, most K2 models lose less than 1% of their capacity (industry standard is 4%). Get virtually all of the boiler that you're paying for with a K2!



K2FT
NEW high efficiency condensing boiler with fire tube heat exchanger

Both available as Combi boilers!

Want hot water as well as home heating? Both the K2FT and the K2WT are available with a combi option.



K2WT
High efficiency condensing boiler with fire tube heat exchanger

Alpine Boilers



■ Alpine boiler, "most efficient"

The Alpine boiler has been certified as a "most efficient" boiler. At 95% AFUE, it is the highest efficiency product manufactured by U.S. Boiler Company.

■ Wall or floor mounted? You have the choice.

Looking for additional floor space? The Alpine boiler is available as a wall mounted boiler (in four sizes, 80-210 MBH). Cabinets are also designed to be stackable for installations which may require multiple boilers.

■ Many sizes available

Alpine boilers are available in (6) sizes, ranging from 70 to 280 MBH. This range of sizes provides a wide array of possibilities to match the correct boiler, or boilers to the heating requirements of your home.

■ Multiple boiler installations

In some situations, multiple boiler installations may be a better choice than a larger, single boiler. This is where the Alpine REALLY shines ...not only can these boilers be easily linked together, but they also automatically communicate with one another and share the load of heating the space. Smart features built into the boiler provide capabilities such as "lead/lag cycling". As the name implies, once linked together by way of a simple RG-45 phone cord, one boiler takes the lead, and the other(s) will supplement the heating load. In this type of installation, boilers "talk" to each other continually and take turns at being the lead boiler. By doing so, the load is shared equally between all the boilers in the heating system.



■ A proven, versatile performer

The Alpine has gained a reputation as an efficient and reliable full-feature boiler. It also has one of the widest range of sizes of any boiler available in the industry, enabling an incredibly wide array of applications.

X-C Boilers



Anything but "basic"

The X-C boiler comes equipped with standard fuel saving features, such as "Outdoor Reset", and built-in multiple firing rates. that also come standard in the other condensing boilers that U.S. Boiler Company manufactures. It also shares the Sage2.2 boiler control system, and its reliable and proven heat exchanger with U.S. Boiler's other water tube condensing boilers.

High efficiency at low price!

The X-C is a "value priced" condensing boiler, but that doesn't mean that it's "bare-bones" by any stretch. The X-C is a feature-packed condensing boiler for homeowners looking to upgrade to high efficiency at a lower initial price point.

High efficiency, high performance

With AFUEs up to 95%, the X-C does an outstanding job of establishing a balance between high efficiency and high value. This is achieved by mating the proven and reliable performance of a high efficiency heat exchanger with the Sage2.2 control system. The Sage2.2 is designed to be very easy to set up, allowing "out of the box" setup. This saves homeowners both time and money in installation costs.

Popular sizes available

X-C boilers are available in (5) sizes. These boiler sizes span a range of that is typically used in most residential installations.

A certified performer

The X-C boiler, along with every boiler that U.S. Boiler Company manufactures, is certified by the



American Society of Mechanical

Engineers (ASME). This certification is represented by the "H-Stamp" logo placed on our products.

This logo signifies that the boiler has passed the requirements set forth by ASME. It certifies that the boiler conforms to the rules governing the design, fabrication, assembly and inspection during the manufacturing process. It's an important designation that gives assurance that the X-C boiler has been designed and manufactured using the best practices of the boiler industry...a value that U.S. Boiler insists upon adhering to on every product that it manufactures.

Condensing Boiler Q&A

Some common questions associated with U.S. Boiler condensing products...

■ What is the difference between condensing and non-condensing boilers?

The answer is “efficiency”. The most efficient boilers keep heat in the house rather than letting it escape through the chimney or vent pipe. An ultra-high efficiency boiler, is able to keep more heat in the heating system, but the side effect is condensation.

■ What happens to the water formed in the condensation process?

Water will condense from escaping flue gases when they are cooled to a certain temperature (this is also known as the “dew point”). In less efficient boilers with high flue temperatures, this happens well outside the home, sometimes a number of feet above the house, and the condensation simply evaporates. In higher efficiency boilers, the lower flue temperatures enable this process to happen inside the heating system. The water produced in the condensation process can be destructive to traditional boilers, but condensing boilers are designed to operate under these conditions, and are equipped with condensate drains.

■ Can I use one of these condensing boilers as a replacement boiler for an older heating system with large radiators?

These boilers will work in most types of installations. For large water volume systems using cast iron radiators, all are a good choice. For high temperature systems, such as fin-tube style baseboard radiators, or in homes where it may be impractical to vent a boiler directly to outside air without using a chimney, the Burnham ES2, Series 3, or Series 2 gas boilers may be a more viable option. A consultation with a professional home heating contractor will provide the best answer.

■ Is a condensing boiler going to be the best choice for my home?

There are many factors to consider when determining the best choice for your home. The heating system in a home not only includes the boiler, but also all of the pipes, valves, pumps, and heat distribution as well. Your professional heating contractor will be able to determine what heating equipment will be best suited for your home heating system. Typically, condensing boilers operate most efficiently in homes with low system temperatures, such as those with radiant floor systems or in homes with high water volume cast iron radiators. In these applications, condensing boilers do not use indoor air for combustion and require a means to vent the boiler directly to the outside (not chimney venting).

■ What's the difference between the X-C "value boiler" and the rest of these condensing boilers?

The most simple explanation is that the X-C is designed to be a standalone boiler in your heating system. The K2 series and Alpine models are designed to be a key component that actually *drives* your heating system. These models have more built-in heating system capability than the X-C does.


■ Is there any difference in the way a combi performs vs. a traditional water heater?

Under most circumstances, there will be little or no difference between a combi and a traditional water heater. The exception would be in families that take multiple showers and run hot-water consuming appliances simultaneously. If that kind of hot water consumption is the norm, ask your professional home heating contractor to show you the comparisons of hot water output so you can make an informed decision on which method of delivering domestic hot water is the best fit for your family.


Models, Sizes, & Efficiencies

For complete technical specifications and dimension information on these products, please visit our website at www.usboiler.net




K2FT Ratings & Specifications				
Model	 AFUE %	Input (MBH) min-max	DOE Heating Capacity (MBH)	Net AHRI (MBH)
K2FT-085	95.0	17-85	79	69
K2FT-110	95.0	22-110	102	89
K2FT-155	95.0	31-155	145	126
K2FT-205	95.0	41-205	190	165
K2FT-270	95.0	54-270	251	218
COMBI MODEL				
K2FTC-155	95.0	31-155	145	126




K2WT Ratings & Specifications				
Model	 AFUE %	Input (MBH) min-max	DOE Heating Capacity (MBH)	Net AHRI (MBH)
K2WT-080	94	16-80	74	64
K2WT-100	93	20-100	92	80
K2WT-120	94	24-120	111	97
K2WT-150	95	30-150	141	123
K2WT-180	94	36-180	167	145

NOTE: Combi option available as add-on kit for K2WT-150 & 180. For more information, please visit www.k2boiler.com or www.usboiler.net




Alpine Models—Wall or Floor Mount		
Boiler Model	Input MBH (min-max)	 AFUE%
ALP080	16-80	95
ALP105	21-105	95
ALP150	30-150	95
ALP210	42-210	95



Alpine Models—Floor Mount ONLY		
Boiler Model	Input MBH (min-max)	 AFUE%
ALP285	57-285	95
ALP399	80-399	94*

*Thermal Efficiency



X-C Ratings & Specifications				
Model	 AFUE %	Input (MBH) min-max	DOE Heating Capacity (MBH)	Net AHRI (MBH)
X-C080	94.0	16-80	74	64
X-C100	93.3	20-100	92	80
X-C120	94.0	24-120	112	97
X-C150	95.0	30-150	142	123
X-C180	94.0	36-180	170	148

Additional Gas Boiler Options



U.S. Boiler Company offers a complete line of gas-fired cast iron water boilers. For information and the complete line of U.S. Boiler Company products, please see product literature or visit www.usboiler.net

Before purchasing, read important information about estimated annual energy consumption, yearly operating cost, or energy efficiency rating that is available from your retailer.



www.usboiler.net

