Accel CS™

Simply the smartest heating design ever developed for home or business, with the industry's proven top efficiency!

Awarded the ENERGY STAR® Most Efficient mark in 2019.

- UP TO 97% AFUE
  - Exceptional Features:
    - Cuts fuel bills up to 40% or more*
    - Why settle for yesterday’s reset controls that can leave you out in the cold?
    - Quietest operation of all boilers!
      - LONGER hot showers!
    - BEST Lifetime Limited Warranty
    - Natural Gas or Propane!

Plus! Accel CS improves on the highest real efficiency of all systems tested!

-In a US Department of Energy Brookhaven Laboratory study
* See page 2

- Accel CS

- Awarded the ENERGY STAR® Most Efficient mark in 2019.
Accel CS is an integrated system, which means it produces both heat and hot water!

Heat and hot water are the largest energy consumers in cold climate homes. Accel CS is a single high efficiency appliance that delivers the best of both. The result is comfortable warmth for living spaces, plus abundant kitchen, bath, and laundry hot water including nearly endless hot showers.

What is the primary advantage of Accel CS?

Condensing technology is already established as a high efficiency heating method. Accel CS takes it further, first with better construction and then by incorporating condensing technology in a combined system, a common sense marriage of processes that is simply smarter than any other heating system. Among many benefits, Accel CS runs more intelligently and adapts more swiftly to changing demands. As a result, it delivers bigger fuel savings (greater efficiency) in every area of heat and hot water production.

Under contract with the US Department of Energy, a Brookhaven National Lab study confirmed:

U.S. energy guide (AFUE) ratings miss significant areas of energy loss, and do not reflect the real efficiencies of common heating systems.†

THIS CHART SHOWS HOW ACCEL CS BEATS THE BEST REAL EFFICIENCIES OF ALL SYSTEMS TESTED.

REAL EFFICIENCY DIFFERS FROM AFUE. OFFICIAL GOVERNMENT AFUE RATINGS ARE SHOWN IN THE SMALL YELLOW BOXES. THE LARGE YELLOW NUMBERS INDICATE REAL EFFICIENCIES.

†This means that some Annual Fuel Utilization Efficiency (AFUE) ratings underestimate fuel consumption by more than 50%.

††Data and conclusions are drawn from the report "Performance of Integrated Hydronic Heating Systems." Paper and presentation by Brookhaven National Laboratory, Upton, NY, under contract No. DE-AC0298CH10886 with the United States Department of Energy by Dr. T. Butcher; and "Chimney Related Energy Losses in Residential Oil-Fired Heating Systems."
The Accel CS vessel contains over 70 pounds of high grade stainless steel.

By comparison, our plate heat exchanger draws cold water from the bottom of the tank and feeds hot water from the top down. This delivers the highest efficiency through the entire hot water cycle.

Our hot water plate heat exchanger maximizes condensing—during every hot water cycle.

Accel CS features an internal pressure vessel of American made 316L domestic stainless steel...plus the highest grade AL294C stainless steel for its condensate collector and flue (a rugged material originally developed for the nuclear power generating industry).

Our plate heat exchanger vastly outperforms old fashioned coil in tank systems.

Old fashioned tank with coil
This design is inefficient because the tank heats slowly all over, even when you need only a small amount of heat or hot water. In addition, the temperature of the system’s boiler is allowed to rise above the tank’s temperature, meaning there is an automatic loss of heat energy every time the boiler heat has nowhere to go, which wastes energy.

Plate Heat Exchanger
By comparison, our plate heat exchanger draws cold water from the bottom of the tank and feeds hot water from the top down. This delivers the highest efficiency through the entire hot water cycle.

Accel CS features removable panels for very easy service if the need arises.

Fold down door for easy access to control options
Hot water priority duration option
Return water temperature sensor

Modulating burner with 5:1 turndown ratio to match heating load
Outlet water temperature sensor (not shown)
Flue gas temperature sensor and limit (not shown)
Outdoor temperature sensor (not shown)

Ask for our free Accel CS DVD!

Accel CS means better heating and bigger savings, plus peace of mind for you and your family.
Hybrid Energy Recovery® – the easy-set controls behind Accel CS efficiency!

The Accel CS Condensing Hybrid Energy Recovery Control integrates thermal purge with temperature reset for the best year-round performance and hot water efficiency. Accel CS’s rapid hot water recovery squeezes more out of your fuel dollars. Unlike systems where the boiler heats up along with the tank (which can virtually stop the condensing operation) our advanced plate heat exchanger can run at full output while maintaining peak condensing!

Control panel features

Zone Control – The primary/secondary loop option controls up to 4 separate thermostats and zones, and includes a relay for the primary loop circulator, with fast and easy setup.

SmartBoost™ Comfort – Outdoor temperature reset can leave your home cold when recovering from overnight setback or whenever you turn up your thermostat. But our Smart Boost technology automatically adjusts to make your home warm and comfortable faster.

Auto Express temperature settings allow quick selection for baseboard, radiators, air handlers and other systems. Optional custom outdoor reset boiler supply temperatures can be enabled with the flick of a switch.

ACCEL CS SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>EK1C</th>
<th>EK2C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Input, Btu/HR</td>
<td>90,000</td>
<td>120,000</td>
</tr>
<tr>
<td>Maximum Output, Btu/HR</td>
<td>86,000</td>
<td>115,000</td>
</tr>
<tr>
<td>AFUE</td>
<td>97%</td>
<td>96%</td>
</tr>
<tr>
<td>Maximum Supply Temperature</td>
<td>Water 210°F</td>
<td>Water 210°F</td>
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<tr>
<td>Maximum Pressure</td>
<td>75 PSI</td>
<td>75 PSI</td>
</tr>
<tr>
<td>Weight, Pressure Vessel, dry</td>
<td>70 lbs</td>
<td>90 lbs</td>
</tr>
<tr>
<td>Weight, dry w/o stand</td>
<td>200 lbs</td>
<td>275 lbs</td>
</tr>
<tr>
<td>Weight, w/ water and w/ stand</td>
<td>270 lbs</td>
<td>375 lbs</td>
</tr>
<tr>
<td>Water content</td>
<td>5 gallons</td>
<td>6-1/2 gallons</td>
</tr>
<tr>
<td>Supply &amp; Return Piping Size</td>
<td>1”</td>
<td>1-1/4”</td>
</tr>
<tr>
<td>Gas Supply Connection</td>
<td>3/4”</td>
<td>3/4”</td>
</tr>
<tr>
<td>Size with Stand</td>
<td>15”D x 25-7/8”W x 62-7/16”H</td>
<td>17-1/2”D x 28-1/8”W x 69-7/16”H</td>
</tr>
<tr>
<td>Size without Stand</td>
<td>15”D x 25-7/8”W x 50-7/16”H</td>
<td>17-1/2”D x 28-1/8”W x 57-7/16”H</td>
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<tr>
<td>Maximum Venting and Air intake Lengths</td>
<td>103 ft equiv 3” polypropylene (intake may be pvc)</td>
<td>100 ft equiv 4” polypropylene (intake may be pvc)</td>
</tr>
<tr>
<td>Power requirements</td>
<td>120 VAC, minimum of 12 amps</td>
<td>120 VAC, minimum of 12 amps</td>
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</tbody>
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INSTALLATION FLEXIBILITY

WITH MULTIPLE VENTING OPTIONS

- Sidewall direct venting
- Through the roof
- Chimney

Energy Kinetics / System 2000®
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(800) 323-2066 Fax (800) 735-2068
Better heating, bigger savings from the Energy Kinetics family of products.
visit energykinetics.com

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