

Benefits of using STEP Touch[®] thermostat with STEP Warmfloor[®] low-voltage self-regulating PTC semi-conductive polymer heating elements

The STEP Touch[®] thermostat is not an on/off control device typical of thermostats used with conventional heating systems. The STEP Touch[®] thermostat is designed to pulse the AC Power Supply, EPI-LX-R series, or DC Controller which in turn powers the STEP Warmfloor[®] self-regulating heating elements closely matching the heat output according to heating needs for a zone and to prevent excess temperature typical of other heating systems. These pulses ensure a maximum level of efficiency and personal comfort.

The high energy efficiencies achieved with a STEP Warmfloor[®] system controlled by a STEP Touch[®] thermostat are due to the continuous pulsing operation of the system (every 1.5 seconds). These continuous pulses allow the system to continuously add the right amount of heat to maintain a constant and comfortable environment. With a traditional forced air on/off controlled heat system, the system is on and off for long durations requiring significant heat input each time the thermostat calls for heat. This results in a variable and drafty environment with low energy efficiencies compared to radiant heat. The STEP Touch thermostat maximizes the efficiency of the STEP Warmfloor[®] system by only requiring the system to gently replace the heat that is lost from the zone.

NOTE:

Consumers are often advised that installing a programmable thermostat can save them anywhere from 10 to 30% on the space heating and cooling portion of their energy bills. While reliant on proper use of the programmable thermostat, such savings are easily true in theory; however, there needs to be more field-tested data to better substantiate savings claims. Analyses from recent field studies have suggested that programmable thermostats may be achieving considerably lower savings than their estimated potential.

Why is there a discrepancy between the theoretical and actual savings with programmable thermostats? Because the proposed savings were, in actuality, theoretical. That is, they were based on computer models and not on real-world experience. Now that there's enough real-world data, it's clear that programmable thermostats have only a minimal impact on energy consumption. As in other areas of personal finance, it's human behavior that makes the most difference.

Programmable thermostats can reduce energy consumption – if they are used right, under ideal conditions. But so can regular thermostats. What does make a difference on your heating and cooling costs? According to a Wisconsin study, your attitude toward conservation makes a big difference in energy consumption.

In 2009, the EPA (US Environmental Protection Agency) suspended Energy Star certification for programmable thermostats, writing:

<EPA has been unable to confirm any improvement in terms of the savings delivered by programmable thermostats and has no credible basis for continuing to extend the current Energy Star specification.>

The ENERGY STAR specification for programmable thermostats was suspended on December 31, 2009 and the Energy Star label is no longer available for this category. Manufacturers were required to cease using the Energy Star name and mark in association with all products manufactured on or after December 31, 2009.