

Thursday 11 February - Energy Conserving Investments

We know we have to protect the environment, so any product we install as energy conserving investment will help us protect the planet. If we have hard water we can make an improvement with this product.

The softner

Research report

"Softened Water Energy Saving Study-Controlled Experimental Testing Program on Household Heaters" New Mexico State University.

Purpose

The purpose of this study was to measure and quantify differences, if any, in energy consumption of household water heaters installed and operated on hard versus softened water supplies. The objectives were to determine if softening water saves energy in gas and electric hot water heaters, and to determine how accumulated scale and sediment in heaters affects energy consumption.

Results

Gas Water Heaters in terms of additional energy consumed, the group of used water heaters on hard water took 29.57% more BTU's than the group on softened water to provide the same amount of hot water.

Electric Water Heaters in terms of additional energy consumed, the group of used water heaters on hard water took 21.68% more BTU's than the group on softened water to provide the same amount of hot water.

Observations

Hard water can contribute to the build-up of a layer of insulation (in the form of scale) between the water and the heat source. Scale acts as an insulator and is a poor conductor of heat.

When such a scale and sediment builds up in the heater tank, it insulates the water from the heat sources being used to heat it.

In order to heat the water in such a situation, it is first necessary to heat the scale that has built up in the tank. The energy used in heating this scale is largely wasted. As a result, water heaters with such a scale build up work harder and use more energy to deliver a given amount of hot water than heaters which do not have the handicap of this unwanted hard water scale.

Consumers periodically disconnect their water heater and remove built up scale. By far, the easiest and most effective way to control scale build up is to remove the scale hardness minerals from the water before it reaches the water heater. This can and is accomplished every day in the millions of homes and commercial establishments that have installed ion exchange water softners.

In most applications, the operation of a properly designed water softner will either eliminate or vary greatly reduce the build-up of hard water scale, as the New Mexico State University test showed.

Important note :

The following facts and qualifications should be taken into consideration when interpreting these results :

- All findings are based on the units used and on the hard water available in the Las Cruce, New Mexico area during the operation period. The testing groups' average water hardness ranged from 9.4 to 14.3 grains per gallon.
- In addition to the level of water hardness, there are a number of factors which combine to determine if scale will form in a heater tank and at what rate it will build up. These also include water temperature, pH, and total dissolved solids (TDS). These factors vary from water supply to water supply and may vary over time within a single water system.

For more information :

The complete 137 page research report, order

R14 may be purchased from : Water Quality Association.

With this information it is easy to realize that a water softener is an investment in your property. Before purchasing a softner, it is important to get a water analysis done to

determine the amounts and kinds of contaminants. Many different models are available, first verify if the unit is approved by ANSI/NSF 44, and look for engineer specifications to know performance of each unit

We have a multi-compartment unit that offers complete flexibility in water treatment the Watermax. Save up to 80% on water and back wash time and up to 50% on salt, you get maximum of energy conserving investments.