

SmartRooms

Thermal Comfort System

By Therma-Ray

Frequently Asked Questions SmartRooms Earth Storage Vs. Hydronic Systems

How Does the SmartRooms Earth Storage system compare in cost to “Install” vs. hydronic tubing systems using natural gas, propane, fuel oil or electric boiler systems?

SmartRooms Earth Storage systems are typically considerably less expensive to install compared to hydronic systems with a boiler. The most important thing to remember when comparing **SmartRooms** to Hydronic systems is to be sure to compare the “Total” install cost. Very often you will find that a hydronic quote does not include all the necessary equipment and labor to complete the installation. Be sure that the quote includes the following: Ground Preparation, Insulation, Tubing, Manifolds, Piping, Pumps, Boilers, Thermostats, Wiring, and all the labor associated with the different stages of installation.

How Does the SmartRooms Earth Storage system compare in cost to “Operate” vs. hydronic tubing systems using natural gas, propane, fuel oil or electric boiler systems?

SmartRooms Earth Storage systems are typically less to operate on a monthly basis compared to hydronic installs.

1. **SmartRooms** systems do not require or recommend insulation below the heating panels. Most hydronic installs are done by stapling the tubing to Styrofoam insulation which limits the thermal mass that the heating system can create. **SmartRooms** creates a much larger thermal mass and therefore has more stored energy below the concrete slab. More stored energy equates to lower operating costs.
2. **SmartRooms** systems also qualifies for the Off-Peak Storage rate offered by the power companies, hydronic systems typically do not qualify for this rate, due to the fact that they do not have enough stored energy in the thermal mass to maintain temperature throughout controlled periods. Most hydronic systems are run on a dual fuel or general service rate, which is normally at a higher cost.

How Does the SmartRooms Earth Storage system compare in cost for “Maintenance” vs. hydronic tubing systems using natural gas, propane, fuel oil or electric boiler systems?

SmartRooms is a “very low” to a “no maintenance” system. Once the **SmartRooms** system is installed the only maintenance will be to set the thermostat for your own personal comfort and, over time there may be a relay in the control box that may need replacing. Hydronic systems by design will inherently need a considerable amount of maintenance. More moving parts means more to repair, replace and maintain over time. Corrosion, leaks, normal wear and tear of all components are all common traits of a hydronic system. Glycol / Water mixtures need to be monitored and periodically flushed and replaced. Boilers, pumps, manifolds, zone valves and telestats will require maintenance and eventually repair or replacement.

How Does the SmartRooms Earth Storage system compare in terms of “Reliability” vs. hydronic tubing systems using natural gas, propane, fuel oil or electric boiler systems?

Hundreds of thousands of **SmartRooms** heating panels are currently installed and have been operating efficiently for over twenty years, boasting “No” recorded manufacturing defects. The materials used in the manufacturing process are the highest quality in the industry. To insure that an installation is done properly and will last, **SmartRooms** systems are exclusively installed by Certified Electricians / Installers.

Hydronic systems also have a good track record for reliability of the tubing. If installed per manufacturer’s recommendations, most tubing manufacturers currently offer a 25 Year warranty on the tubing. In the past, tubing systems had the potential for leaks due to a breakdown in the materials and the contraction and expansion of tubing in the concrete. Technological advances have made most of these issues non-existent.

Frequently Asked Questions (Con't)

SmartRooms Earth Storage Vs. Hydronic Systems

How Does the SmartRooms Earth Storage “Warranty” compare to the hydronic tubing systems?

Therma-Ray, Inc. currently offers a 10 year warranty on the **SmartRooms** Heating panels. (See Warranty for details)
Most hydronic tubing manufacturers offer a 25 year warranty on the tubing for manufacturing defects. The pumps, manifolds, thermostats, boilers and other components offer a variety of limited warranties. Consult manufacturer for details.

Common Misconceptions

Electric Cable will fail.

In the past there have been some cable manufacturers that have had some issues with systems failing, a lot like some of the tubing manufacturers that produced tubing that ended up leaking. However as previously stated, the **SmartRooms** Earth Storage systems have a great track record with no recorded manufacturing defects.

Another nice feature with the **SmartRooms** system is that the heating panels are wired in parallel on separate circuits so that if for some reason you were to have a panel that failed, the other panels on the circuit and on the system would continue to function properly and your comfort would not be interrupted. Worst case scenario is that if there were an issue with a system, the technology is available to be able pinpoint the problem within a square foot area and make the necessary repairs.

Fuel oil, Gas and Propane are cheaper than Electric.

Typically when you here a comment like this it's usually from the gas companies or from the people that sell related products. The electric rates they normally use to compare to gas prices are typically at the general usage rate from the power company and are a nationwide average. The reality is that the **SmartRooms** systems are run on less expensive electric rates available from the power companies that commonly afford a 10% - 60% savings in operating costs for electric vs. fuel oil, propane and even natural gas. Compared to forced air systems, electric Radiant heat would still be less expensive to operate even at the general service rate, strictly due to the manner in which radiant heat can heat a home.

SmartRooms Earth Storage Benefits

- Energy Efficient
- Maintenance Free
- Ease of Installation
- Superior Radiant Heating Comfort
- Invisible, Quiet, Completely Concealed
- Stellar Track Record
- Cleaner, Healthier – No Circulating Air
- Lower Operating Costs
- Utilizes Off-Peak Rates
- Design Freedom – More Usable Space
- Precise Control in each Room
- Greater Comfort at lower Temperatures
- Less Ex-filtration – Less Dust
- Can be installed in Hazardous Areas

For more information:

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