

Average owner can now afford the luxury of a heated floor

By Jean Murphy | Daily Herald Correspondent | Published: 12/19/2009 10:33 PM

In the United States, heated floors have long been considered a luxury, only available to the wealthy.

The old systems, which pumped hot water through pipes beneath the floor to warm them, were expensive to install, run and maintain, and they were almost impossible to retrofit into an existing home.

But that has changed. Thanks to fiber-thermal technology, floors can now be heated with electricity instead of water.

This new system uses fibers to conduct heat just as fiber-optic technology uses fibers to conduct light. A Buffalo Grove-based firm has made this method easy to install in both new and renovated homes by winding the fiber-thermal wires through a mesh for installation under tile or natural stone floors, or with a pad for installation under laminate or other engineered floors.



Eric Kochman, CEO of ThermoSoft International Corp., shows off the heated floor in a Deerfield home. The home's owner installed a ThermoSoft system beneath this bathroom floor.

Eric Kochman, president and CEO of ThermoSoft International Corp., invented the technology and founded the company in 1996. The first product his company marketed was heated seats that are now so popular in cars. Since then the firm has expanded into radiant heat floors, electric blankets and mattress pads that appear completely free of wires; heated vests, gloves and boots; heated mattresses for pop-up campers, heated dry suits for divers and even heated massage tables.

"These are all now affordable luxuries," Kochman said. "Our technology is so versatile that we can now make all of these things at an affordable price."

For only about \$200, you can add radiant heat floors beneath the stone or tile you are installing in a small to medium-sized bath. The homeowner or installer simply needs to unroll the mesh with fiber thermal wires snaking through it, evenly covering the existing plywood sub-flooring. Then a thin layer of self-leveling cement is applied on top of the mesh to make it adhere to the subfloor. The tile or natural stone is then laid on top of the cement.

The procedure is much the same with engineered and laminate floors, only the wires are attached to a soundproofing mat that can be installed beneath such a floor whether you plan to heat it or not. No cement is necessary with this type of floor.

The best thing about the radiant ThermoSoft floors and all of Kochman's other products, he emphasizes, is that, unlike some other similar products, the system creates no problems with electromagnetic fields that could interfere with cell phones, pacemakers, medical devices and even plasma televisions. The use of two wires, running in opposite directions, cancels out the magnetic problems that can happen with similar products that rely on a single wire.

The double wire structure also makes installation a much easier process because the lead wires that need to be connected to the thermostat are only present at one end of the mat or mesh - not at both ends like they are in some similar products, Kochman explained.

"In Europe, heated floors are pretty common," he said. "But Americans considered them too expensive."

With this new technology, however, that objection has been overcome.

"The addition of radiant heat floor increases a home's value, gives additional comfort and allows homeowners to decrease the temperature on the forced air systems," Kochman explained. "This becomes truer as more and more floors in a house are equipped with the heated floors."

Kochman and others also argue that radiant heat is much more efficient than forced air or even baseboard heat.

"In a forced air system, the heat typically blows around and drifts up to the ceiling almost immediately. In-floor heating provides for warmth to begin at the floor and then rise up," he stated.

"And since heated floors gently warm your feet and that warmth works its way up to your head, you will be able to reduce the amount of furnace-produced heat you use," Kochman said.

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