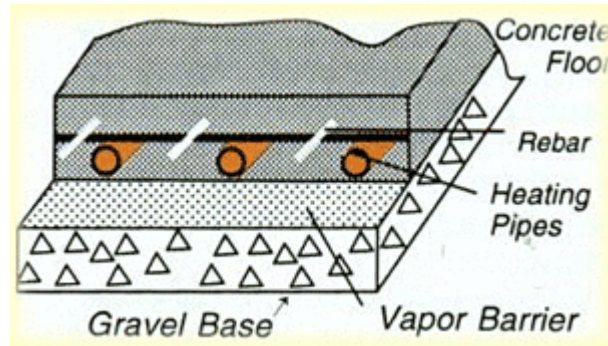


Radiant Floor Heating in a Concrete Slab

Many radiant floor heating projects are in slab-on-grade concrete. Tubing is installed in the slab. Temperature-controlled water then circulates through the tubing in the slabs: this process turns the slab into a radiant panel.



Concrete presents the greatest thermal mass of any of the radiant floor heating methods, which can be a tremendous benefit in rooms or buildings with high ceilings.

<http://www.concretenetwork.com/concrete/radiantfloorheating/>

Radiant Floor Heating Systems

One word describes radiant floor heating: friendly. When you step out of the shower or climb out of bed, radiant floor heating offers your bare feet a toasty welcome. It warms you silently, invisibly, and relatively economically.

Unlike forced-air heating, radiant floor heating doesn't stir up dust or allergens and it cuts down on heat loss through infiltration. A forced-air heating system pulls air out of rooms, heats it, and blows it back into the rooms. This pressurizes a house, pushing warm air out through cracks and openings. Because a home heated solely by radiant heat isn't under pressure, the room air--and heat--stays inside.

And, because of the way radiant heating works, you needn't be as concerned about warm air escaping when you open a door. Although you will still feel a draft, a room heated radiantly recovers quickly. Radiant heat warms your body and other objects rather than just the room's air. This means you can keep the thermostat turned two to three degrees lower than normal without losing comfort. It's kind of like standing in the warm sun on a cold day.

Of course, radiant heating is just heating. It will not cool your home or clean the air. If you live in a climate where cooling is necessary, you'll need additional equipment for the job, such as zone air conditioners. An exception is a radiant heating system that utilized water warmed by a heat pump--a heat pump can provide cooling in the summer.

If you're considering a radiant floor heating system, you will need to choose between electric and water (hydronic) systems. You'll also need to consider whether the installation will be 'wet' (embedded in a concrete slab or lightweight concrete) or 'dry' (attached on top or beneath the subfloor or sandwiched between two layers of subflooring). The right choices will depend on whether you're dealing with new or existing construction, the type of finish floor you have or wish to install, energy costs in your area, and how much you're willing to spend.

<http://www.hometips.com/cs-protected/guides/radiant.html>