SUMMIT COUNTY HOME

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WARM UP YOUR WINTER

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HOW TO *Heat Your House*

MODERN WARMTH KEEPS HOMES COZY

story by KIM FULLER
photography courtesy DOUBLE DIAMOND PROPERTY

IF YOUR BARE FEET ARE ON A WOOD FLOOR without slippers and your soles don't get cold, you may be walking on water.

In-floor radiant heating is very common in modern mountain homes. The most popular right now is hydronic heat, which is a mixture between water and glycol that runs in tubes underneath the floors.

PREVIOUS PAGE: This photo features supply runs from the geothermal wells running back to the house. These use ground heat to help supplement the use of boilers.

RIGHT: Examples of tubes used for radiant heating.

BELOW: This Summit County house utilizes radiant heating throughout.

Arnie Surdyk, owner of Double Diamond Property and Construction Services, based in Breckenridge, said the best way to install the hydronic in-floor radiant heat is to use gypcrete — a concrete building material used as a floor underlayer to hold the tubes beneath the floor.

Radiant heat runs on warm water from a boiler in the home, which can be heated a variety of ways. A gas boiler heats up by burning natural gas or propane, and then the heated water is delivered to the in-floor heating tubes. Hot water from the boiler can also be directed to a home's hot water supply, to a snow melting system or to heat a pool or hot tub.

Homeowners or builders who are looking for a more environmentally sound option could use solar panels to heat the boiler.

"One method that is popular and that we are seeing more and more of is hydronic solar, where solar heats the system," said Surdyk. "It basically backs up to your boiler, so you're using energy from the sun to heat the home."

Another earth-inspired option is geothermal heat. Surdyk said Double Diamond installed it in a large home about a year ago. It has an expensive upfront cost, but uses heat from the ground to heat the boiler. The method relies on a series of underground holes, dug like wells, to draw heat up from the ground and into a home's in-floor radiant system.

ELECTRIC COMEBACK?

Surdyk said hydronic in-floor radiant heat is what Double Diamond implements into projects, as he believes it is the most efficient and practical option. He said electric in-floor radiant heat is not as efficient for building full homes.

"Not many people use electric up here," he said. "It is more practical for a remodel than a reconstruction."

Nancy Andersen, owner and manager of Cornerstone Creations, based in Frisco, said although hydronic in-floor radiant heat has become the standard these days, it is pretty

expensive to install. And as a remodeling contractor, she said her problem with it is once you have in-floor radiant heat, it's really hard to move walls.

"Once you're into those heat zones, you can puncture a line as you're altering the zones from one location to another," she explained.

Electric in-floor radiant heat, she said, has come a long way, although there is still a resistance to using it.

"There is still a fear factor with contractors because they are in their comfort zone and don't like to get out of it," she said.

"This thermostatically controlled, electric in-floor radiant heat is about a third of the cost to install, and the utility bills in the test houses are looking very reasonable," she added. "I do think this product will make its mark, as soon as someone gives it a chance."

ABOVE: This Summit County home utilizes geothermal and radiant heat. Radiant heat runs on warm water from a boiler in the home, which can be heated a variety of ways.

RIGHT (2): These rooms feature in Summit County houses that utilize radiant heat. Nancy Andersen, owner and manager of Cornerstone Creations, based in Frisco, suggests considering using fireplaces as a primary heat source.

MORE THAN FLOOR HEAT

Another alternative for heating the home, Andersen explained, is electric co-heating. This is a great option for older homes that already have electric baseboards and don't necessarily need a $20,000 heat change.

"This method is mounted to the top of the wall, up by the ceiling," she said. "The co-heaters themselves cost about the same as an electric baseboard heater, and run on about 50 percent of the electricity. Also, this is an easy install if you're dealing with a home that has existing electric baseboards."

And if you think fireplaces are cozy, Andersen said you can use them as your primary heat source. Fireplaces are also helpful in circulating heat through modern homes — which are built tightly — instead of having to add air movers and filtration systems to bring fresh air into a home.

"If you use fireplaces as your primary heat source, you might have to put in a few more of them throughout the house, but gosh, that's a nice feature to have," she said. "And each fireplace brings in fresh air from the outside, heats it up and pushes it into the room."

Consider an extra-efficient fireplace, like one that Cornerstone Creations has available to install. It's 93 percent energy efficient, and the two gallons of water that it creates as a fuel bi-product is filtered and pumped up to the top of the fireplace, making it a built-in humidifier.

"That's killing two birds with one stone," Andersen said of using the efficient fireplace, "and being very useful of a bi-product that would otherwise be down the drain and be more waste."

When choosing a heating system to put in your home, she suggested to consider what the future of the home will be. Will you ever want to reconstruct or expand, for example?

"You might want to upsize or downsize within your home," she said, "and your heating needs should be routed to accommodate those future plans."