

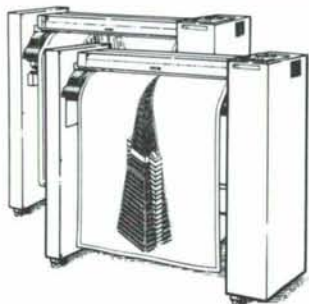
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## How Infloor Is Changing The Way America Heats Its Homes

For years the standard home heating system has been a forced-air furnace. This method, however, lacks energy efficiency and provides heat that's uncomfortable. Now there's a better alternative.

Unlike conventional systems that circulate warm air, a radiant floor transfers heat directly. With such a large "radiator" the floor provides a much higher quality heat than a forced-air register or a baseboard unit. This heating method is widely used in Europe. In fact, more than 60% of the homes in Scandinavia, Germany and France have radiant floor heating. And its use in this country will grow, thanks to the new made-in-American Infloor Heating Systems.

### How radiant floor heating works

As its name implies, the floor heats a home. With the Infloor systems, hot water tubing or electric cables are embedded in a thermal mass of Gyp-Crete 2000 Infloor Blend Floor Underlayment. Warm water circulating in the tubing (or electrical resistance in the cable) transfers heat to the Gyp-Crete 2000. This thermal mass then silently radiates heat to the entire home. The floors never become hot, just pleasantly warm.

### Why radiant floor heat outperforms conventional systems

Modern radiant floor heating is unsurpassed. Radiant floor heat (Like heat from the sun) is not carried by air currents. So there are no drafts or hot-air surges that hamper forced-air systems. Baseboard heating also depends, to some degree, on this principle of circulating air. As a result, radiant floor heat is more comfortable, less noticeable.

### Radiant floor heat reduces energy expenses

Radiant heat is uniform with little or no temperature difference between the floor and ceiling. That makes for increased heating system efficiency. And because hot air doesn't collect at the ceiling where it is most likely to escape, a radiant floor system can reduce heat loss by up to 25%.

What's more, Infloor systems warm people not just air, so occupants are comfortable at lower temperature settings. That's important because home owners and businesses can save 3% on their heating bill for every degree they lower their thermostat. Overall, radiant floor heat costs from 15% to 20% less to operate when compared to conventional systems.

### Dust-free heat

Radiant floor systems eliminate the blowing of dust and allergens into a room. The common throw-away filters of a forced-air system remove only a small percentage of these contaminants. The remainder are carried through the cold-air return and blown out again through the heat registers.

Another benefit is the ability to create separate zones of heat. For example, rooms facing north can be heated to a higher temperature without overheating the rest of the home.

### How Infloor made radiant heat better

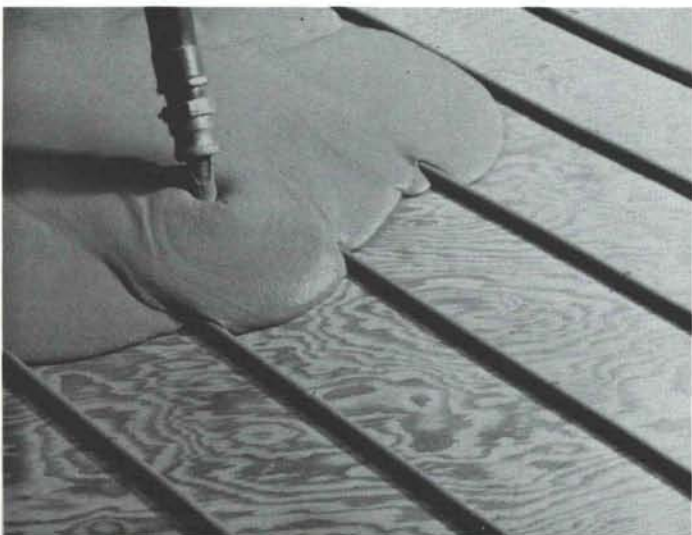
First of all, Infloor developed separate hot water and electrical systems. So there's the freedom of choice for the home owner. Obviously, local energy costs also influence the decision.

But Infloor took systems versatility much further. Infloor specially designed its hot water system for use with virtually any heat source. This system can be connected to boilers, heat pumps, solar collectors, water heaters...any heat source that can deliver water up to 190°F.





*Sound controlling, fire resistant Gyp-Crete 2000 completely encases the Infloor hot water tubes for uniform transfer of heat.*



*Hot water tubes are first stapled to the floor. They're then covered with a layer of Gyp-Crete 2000 Infloor Blend.*

Water from the primary boiler "loop" is mixed with water in the "secondary" Infloor loop to maintain the desired floor temperature. This water is circulated through the various tubes in the floor. The zone control unit is placed within a wall cavity in an easily accessed, but out-of-the-way location. The back of a closet works well.

There are less controls for the electric Infloor system. In fact, the only evidence of a heating system is the wall thermostat. Both Infloor systems can be installed over concrete slabs or typical joist-supported wood floors.

#### **Infloor increases design creativity**

With Infloor, the basement has no furnace or unsightly duct work. An Infloor basement is open and totally available for living space. And home owners can use the same hardwood flooring and tile as the rooms above.

With either Infloor system, there are no heat registers or cold-air returns. There's nothing in the Infloor system that interferes with the placement of interior furnishings.

#### **Simplified installations**

Many contractors have avoided radiant heat systems because of complex system engineering. Not anymore. Infloor Heating Systems publishes design and installation guides that greatly

simplify this preliminary work. For example, easy-to-follow charts help the contractor determine zone size and floor heat output.

#### **The ideal thermal mass**

Gyp-Crete 2000 Infloor Blend floor underlayment is the only thermal mass recommended for use with the two Infloor systems. One reason is because it's the thinnest thermal mass available. Gyp-Crete 2000 is poured to a depth of 1 inch over the electric cables; 1¼ inches over the hot water tubing. A thin thermal mass will begin to heat a room more quickly. So the need for expensive outside temperature sensing devices has been eliminated.

Gyp-Crete 200 brings other benefits to a home, too. It's a non-combustible gypsum underlayment used instead of plywood or particle board. Gyp-Crete 2000 won't warp or delaminate. And squeaks and nail pops—common complaints with wood underlayments—are reduced dramatically.

Gyp-Crete 2000 flows into the opening where the wallboard meets the floor. The result: an impervious flame barrier at the base plates. This barrier also reduces sound transfer between rooms and connecting units. And it keeps out insects, blocks air infiltration along the floor.

The underlayment dries to create an exceptionally smooth surface that extends the life of floor goods, particularly resilient flooring. Carpet, tile, wood, vinyl...virtually any floor covering can be attached to Gyp-Crete 2000.

Most American consumers and even many heating contractors may find this type of heating highly unusual. However, Europeans, particularly the Swedish, have been promoting the benefits of radiant floor heating for years.

The Swedish Housing Group has recognized the superiority of the hot water Infloor system. Their factory-built homes are exclusively designed for radiant floor heating. This group's suburban Minneapolis model home, for instance, is heated by a 95% efficient forced-ventilation boiler and four Infloor zone control valves.

Radiant floor heating — it's a simple idea whose time has come.

Infloor Heating Systems are available through Brekke Distributors in Dallas. (See advertisement page 4.)

## **DIRECTORY OF HISTORIC NEW MEXICO ARCHITECTS TO BE COMPILED**

An editorial board of three architectural historians — Boyd C. Pratt, Carleen Lazzell, and Chris Wilson — have recently received a grant from the College of Fellows Fund of The American Institute of Architects to develop a Directory of Historic New Mexico Architects. The Directory will contain information on architects practicing in New Mexico during the Territorial (1846-1912) and Statehood (1912-present) periods until 1945.

The Directory will consist of alphabetically arranged entries on all known architects. Each entry will include information on vital statistics (dates of birth and death, education and training, professional affiliations, and addresses), history of the architect's firms or firms they worked for, history of their career, including major commissions, and locations of their archival records and published information sources. An introductory essay will discuss the history of architectural practice in New Mexico.

Those who wish to submit an individual entry or provide information on specific architects should write for a table of contents and guidelines for submission to: Boyd C. Pratt, Project Manager, Directory of Historic New Mexico Architects, 1111 Barcelona Lane, Santa Fe, N.M. 87501; (505) 983-1024.