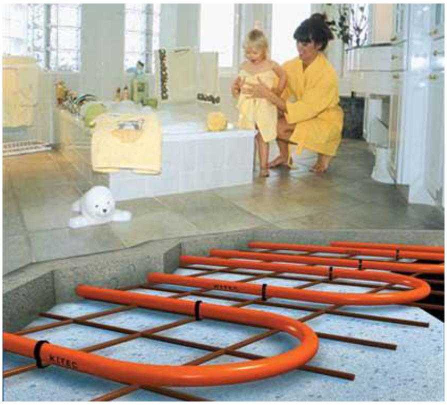
Radiant Heating



Radiant floor heating is one of the most comfortable ways to heat a residence on the market. When installed properly, it can also be very efficient. Radiant heat depends on a large surface area – such as a floor, ceiling, or wall, that is heated

This is due to the relatively low temperature at which radiant floor systems operate. Most conventional hydronic systems use water at a temperature anywhere from 160 to 180 degrees F. Radiant floor heating systems use water at approx. 110 degrees F. Radiant floor heating will work well with most floor coverings except carpeting. The sections below list some of the many different ways to attach radiant tubing to your floor system.

Slab installation:

In a concrete slab radiant tubing installation, two inches of reflective rigid foam insulation should be installed with the reflective barrier face up. Six inch on center rewire should then be installed on top of this insulation in an even grid. We then attach our radiant tubing lines to the rewire with ties. The concrete is then poured over this installation, and tile or wood may be installed on the concrete surface.

In a thin slab installation, we attach our radiant tubes to the sub floor with a radiant tubing stapler. The concrete is then poured over this installation, and tile or wood may be installed on the concrete surface.

Climate Panel installation:

A "Climate Panel" installation is a quick and effective way to install radiant tubing to the underside of the sub floor. A "Climate Panel" is a four foot long aluminum plate that is attached to the sub floor. Our radiant tubes are then run and snapped into these plates.

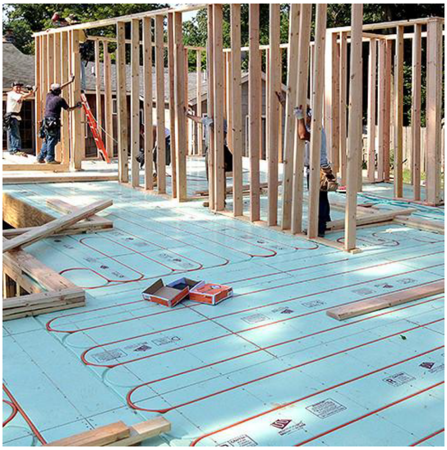
Track flooring system:

Quik Trak
WIRSBO

A track system installation is a way to install radiant tubing above the sub floor. Track system components are a grooved flooring material that is laid down and attached to the sub floor. The radiant tubing is then installed into these tracks. The finish flooring can then be installed.

Warmboard flooring system:

"Warmboard-S is our flagship radiant panel and the leading product in the industry, preferred by architects, builders and homeowners alike. It is a 1 1/8" thick radiant panel that provides unmatched response, energy efficiency and comfort. The thickness of the 7-ply plywood panel also means you can install it as a structural subfloor. Yes – the same labor, skills and tools used to install a subfloor can be used to install Warmboard-S. As the panels are installed, the modular channel pattern automatically produces the tubing layout, a process that takes much more time with other radiant systems. Roll the ½" tubing into the stamped pattern and attach to the hydronic circuit." (from the Warmboard website http://www.warmboard.com/warmboard-s)



Radiant Controls:

tekmar
8:38
Outdoor
58°

Controlling a radiant floor heating system is critical for the successful operation of the system and optimum comfort. The temperature of the radiant tubing should be based on the outdoor temperature. This is referred to as outdoor reset control. This will

Room
72°F
GOING AWAY
HEAT MODE

set a heat curve to tell the radiant floor system what temperature at which it should be operating as based on the outside temperature. Radiant loop temperature control should also be adjusted zone by zone to accommodate for different floor coverings. Radiant systems can either be controlled based on room air temperature or floor temperature. Remote internet access of your radiant floor controls permits you to monitor and change temperature settings.

“The tekmarNet® thermostat 552 is a communicating touchscreen thermostat designed for hydronic heating systems. The extra large touchscreen display allows you to easily adjust 7-day programmable schedules and room temperatures to optimize comfort and energy savings. It operates a single zone of heating and has two auxiliary sensor inputs that can be assigned to measure room, floor, or outdoor temperature. An optional floor sensor allows precise heating of radiant floors by controlling the floor temperature and maintaining the desired room air temperature. Alternatively the room air temperature sensor can also be disabled to solely maintain a minimum floor temperature. The 552 can be wired using 2 or 4 wires to connect to tekmarNet® zoning controls, or can be installed as a stand-alone thermostat using 3 wires. ” (from the Tekmar website http://www.tekmarcontrols.com/products/zoning/552.html)

Radiant Panels and Towel Warmers:

Radiant panels and towel warmers not only provide great comfort, but also add an architectural element to the space that they serve. Radiant panels and towel warmers can be installed throughout the residence or business or be used in conjunction with other forms of hydronic heating. Because radiant panels have a large surface area, they can use lower temperature water like a radiant floor.

Our goal is to be **Martha’s Vineyard’s premier plumbing and HVAC shop** – we appreciate the opportunity to service and install your ***radiant heating*** system!