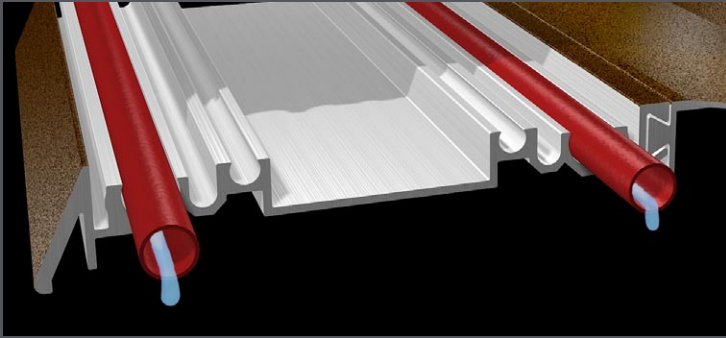


HYDRONIC HEAT SYSTEM



Our Latest Innovation

Homeowner Benefits of Using a Hydronic System

- More energy-efficient than a comparable electric system
- All the same comfort and security of our original Thermal Technologies electric panel systems
- No heavy electrical work required
- Flexible variety of sources for hot glycol, some may already be in your home
- Custom-created system package to suit any homeowner's need: we give you everything you need
- Coordinates beautifully with roof replacement or other home remodeling projects
- Easily added to existing radiant heat systems such as driveway de-icers
- Government rebates may apply to high-efficiency boilers: check with your local city or state

Contractor Benefits of Offering a Hydronic System

- Gives you another "in" to bid your job: now with a "green" option!
- Greater to offer as an add-on option when coordinated with your plumbing, radiant, snowmelt, roofing, geothermal, and/or solar systems installation
- Easily adaptable to pre-existing systems
- Does not require difficult electrical wiring
- System can be custom-sized for your available space
- You can stop as early as the manifolds step, or include everything including the boiler! You control your level of involvement and can coordinate and cooperate with other contractors on the job
- You can assure your customers' complete peace of mind and provide superior service by giving them freedom from ice dam-related roof leaks and spikes in energy costs thanks to our new radiant de-icing systems.



A hydronic roof-melt system using heated-glycol tubing in our panels instead of electric cables is even more energy-efficient and provides the same comfort and security of our electric panel systems.

Now we have a brand-new way to solve your wintertime problems: our own hydronic roof- melt system. This system uses state-of-the-art radiant roof de-icing technologies to not only keep your roof clear, but to save energy too.



Our system is compatible with standard PEX tubing, which means it can be connected to new or existing heated floors and driveway systems.



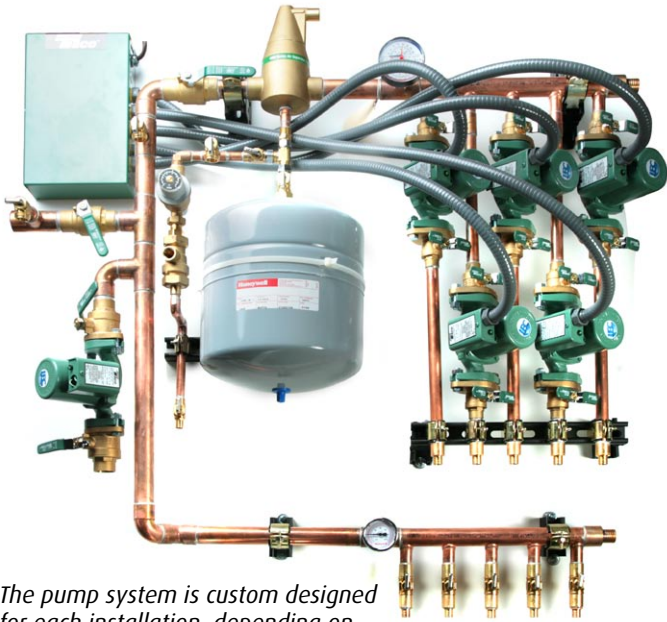
THERMAL
TECHNOLOGIES

14807 S Heritage Crest Way, Suite B
Bluffdale, UT 84065

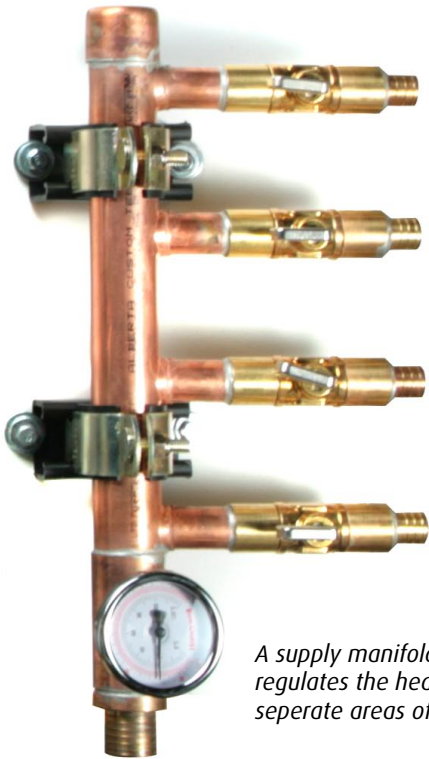
(866) 635-8123
www.thermaltechusa.com

INNOVATIVE
ROOF DE-ICING
SYSTEMS

HYDRONIC HEAT SYSTEM



The pump system is custom designed for each installation, depending on flow length and the number of heat channels. This pump and heat station provides heated fluid for 5 control areas.



A supply manifold splits and regulates the heat flow to separate areas of the house.

How Does Our Hydronic Roof-Melt System Work?

In a nutshell, the conduits within our panels that would normally contain electric heating cables now utilize heated glycol instead. The technology is actually quite similar in terms of function to standard floor radiant systems inside your house. We create custom engineered systems that are designed to fill each individual homeowner's needs.

- A boiler, fluid heater, or geothermal heat pump heats a hydronic fluid (a mixture of glycol and an anti-freeze fluid)
- Customized pumps (generally attached to a temperature sensor) are activated automatically whenever needed, transferring the hot glycol from the boiler and along specialized tubing inside our de-icing panels.
- The heat from the tubing naturally migrates via conduction to the exposed roofing panels, warming them and effectively melting all snow and ice both on the panels as well as in the immediate adjacent areas.
- Once it passes through the system, the fluid is sent to a return manifold and then on to the boiler where it is reheated and sent back through the system again if necessary. No fluid is ever wasted: it is a completely "green" process.
- When the system's temperature controls determine there is no more need to run the glycol through the panels, the pump switching relay turns off the pump and the system goes into a "standby" mode until snow and ice is present again.



Our heated panels warm the entire depth and length of the roof's freeze zone.



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