Snow Melting

Control Systems

- Automatic or Manual Operation
- Hydronic & Electric Systems

tekmar®
Control Systems

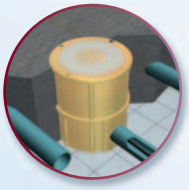
Efficient Snow Melting Made Easier

Snow Melting can be a convenient & cost effective method of snow removal. Whether for critical areas such as emergency vehicle access ways or simply for residential sidewalks, tekmar snow melting controls provide a cost effective solution that is both efficient & reliable.

ENERGY SAVING FEATURES

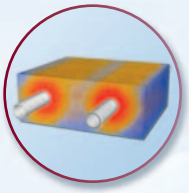
Automatic Start and Stop

The fully automatic snow/ice sensor starts the system when snow or ice is present and stops the system when the slab is dry. This ensures a safely melted slab and improves energy savings when compared to a timer-based system.



Slab Outdoor Reset

Accurate slab temperature control reduces operating costs and helps prevent ice formation. Slab outdoor reset raises the inner core temperature to compensate for colder outdoor temperatures.

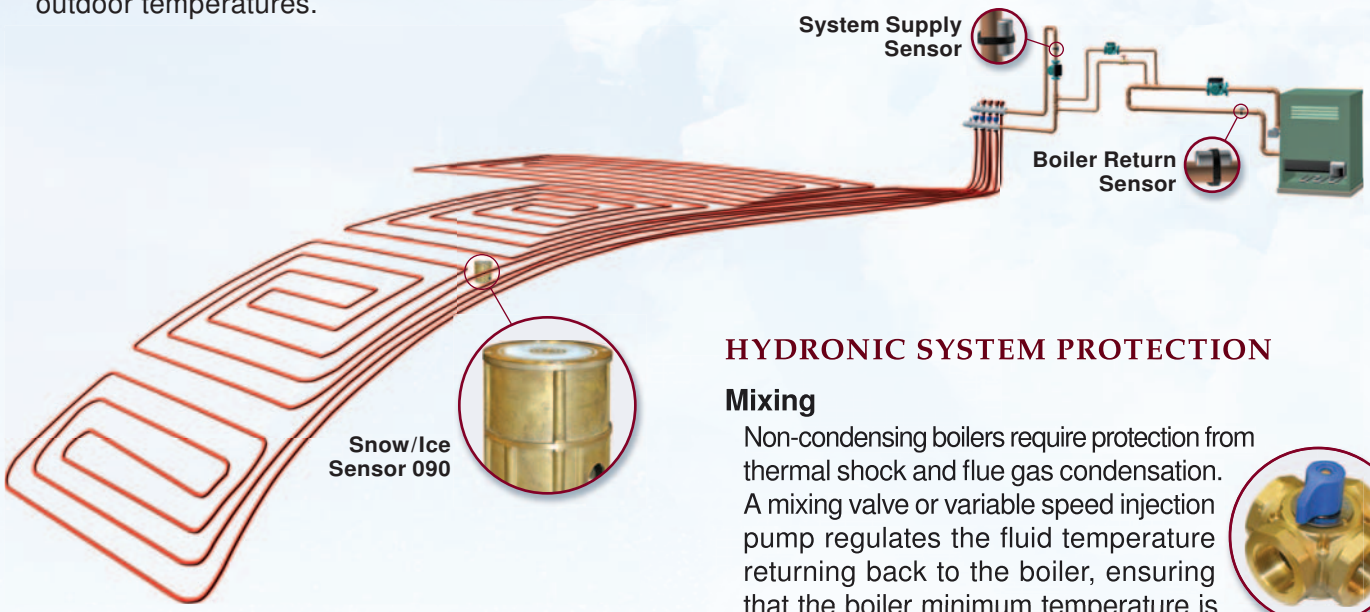


Warm Weather Shut Down

The control can shut down the snow melt system based on the slab and the outdoor air temperature. This provides energy savings as well as a reliable and convenient way to shut off the system.

Cold Weather Cut Out

In extremely cold weather the heat source may not have the capacity to continue melting operation. The snow melt system can be shut down until the outdoor temperature warms up. This provides energy savings and avoids potentially dangerous icy conditions.



HYDRONIC SYSTEM PROTECTION

Mixing

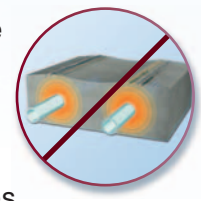
Non-condensing boilers require protection from thermal shock and flue gas condensation. A mixing valve or variable speed injection pump regulates the fluid temperature returning back to the boiler, ensuring that the boiler minimum temperature is maintained.

Idling

Critical snow melt locations such as hospitals and vehicle ramps must melt snow quickly to avoid accumulation. Idling reduces response time by pre-heating the slab just below the melting point. Once snow or ice is detected, the slab is then heated to the melting temperature.

Maximum System ΔT

Rapid temperature increases cause uneven expansion within a concrete slab. Over time, this can lead to cracks in the slab. Setting a maximum temperature difference between the supply and return fluid temperatures helps protect the slab.



Snow Melting Controls

Snow Detector & Melting Control 665
- Controls On/Off Heat Source
- Automatic Snow Detection

Snow Detector & Melting Control 667
- Variable Speed Injection Mixing
- Automatic Snow Detection

Snow Detector & Melting Control 664
- Two Zone, Two Stage Boiler, Mixing
- Automatic Snow Detection

Snow/Ice Sensor 090
- Automatic Snow & Ice Detection
- Measures Slab Temperature

Slab Sensor 072/073
- Measures Slab Temperature

Remote Start/Stop Module 039
- Start or Stop the System from a More Convenient Location
- Adjustable Run Time

Remote Display Module 040
- Access Snow Melt Control Settings from a More Convenient Location
- Adjustable Run Time & Digital Display

	665	667	664
Energy Saving Features			
Slab Outdoor Reset	○	○	○
Warm Weather Shut Down	○	○	○
Cold Weather Cut Off	○	○	○
Temporary Idle	○	○	○
Snow Melt Operation			
Melting Setpoint	○	○	○
Idling Setpoint	○	○	○
Number of Zones	1	1	1 or 2
Protection Features			
Boiler Minimum Protection		○	○
Maximum System ΔT		○	○
Maximum System Supply		○	○
Exercising	○	○	○
Start / Stop Options			
Automatic Start / Stop*	○	○	○
Manual Start / Stop	○	○	○
Manual Start - Run Time	○	○	○
Manual Start - Remote Enable	○	○	○
Remote Start / Stop Module 039	○	○	○
Remote Display Module 040	○	○	○
Mixing Operation			
Floating Action			○
4-20 mA Output			○
Variable Speed Injection Pump		○	○
Heat Source			
Electric Cable	○		
Electric Boiler	○	○	○
Steam to Water Heat Exchanger	○		○
Dedicated Condensing Boiler	○		○
Dedicated Non-Condensing Boiler		○	○
Two On / Off Stages			○

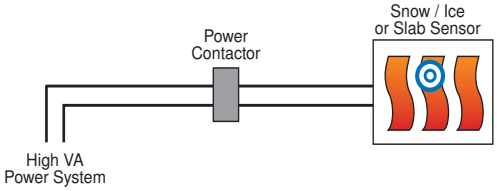
* Requires Snow/Ice Sensor 090

Why Choose tekmar?

tekmar has over 25 years of experience controlling hydronic heating systems. With reliable, cost effective controls that are easy to install and program, there is no reason to settle for a less efficient system. Choose tekmar and benefit from our world class technical support, training and a network of experienced local representatives.

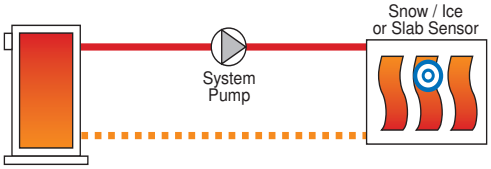
Electric Snow Melting

665



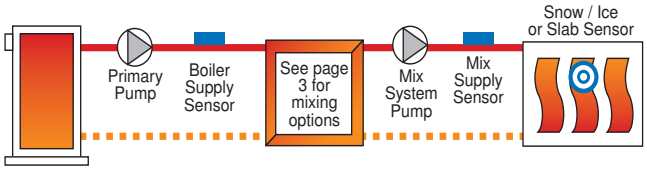
Dedicated Condensing Boiler

665



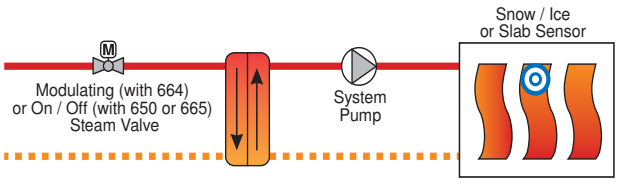
Dedicated Non-Condensing Boiler

667
or
664



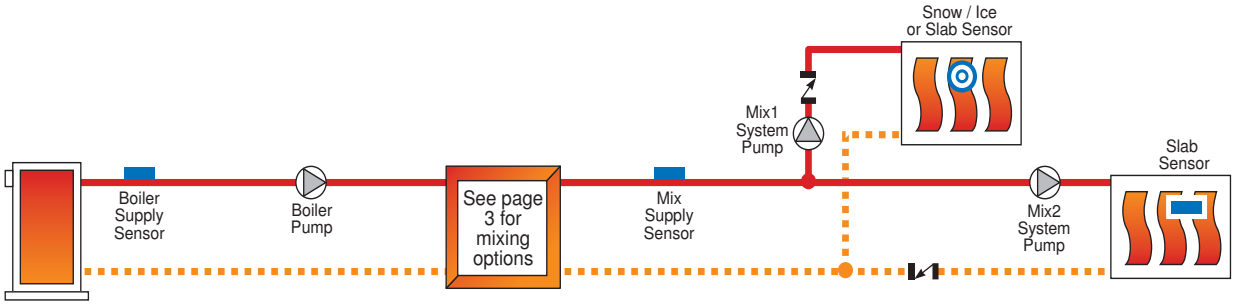
Steam to Water Heat Exchanger

665 or
664



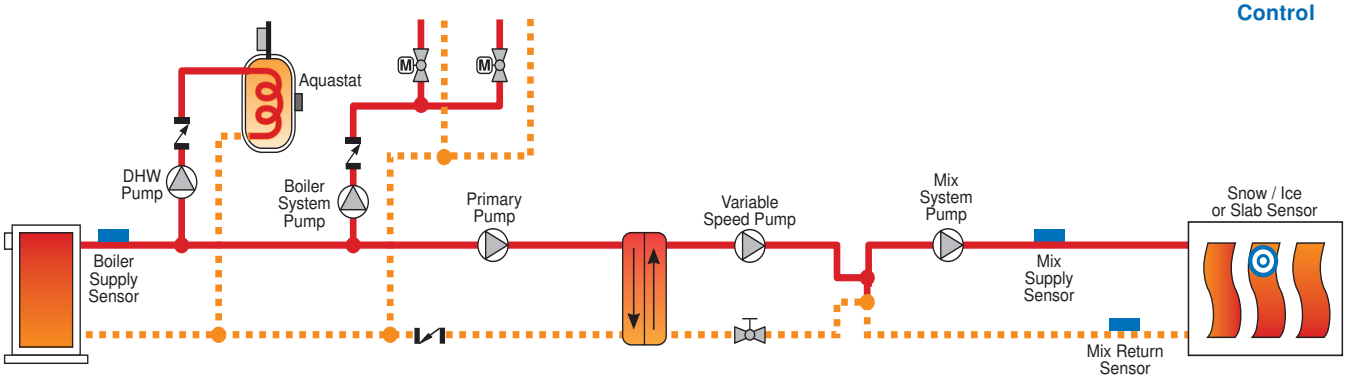
Multiple Snow Melting Zones

664 or
2 x 665



Snow Melting Plus Space Heating & DHW

664 or 667 +
Boiler Reset
Control



Additional applications can be downloaded from the Literature section of the tekmar website.

tekmar Control Systems

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