



Before Heat-Line, all constant wattage heating cable systems required thermostats to prevent overheating. Heat-Line is self-regulating and cannot over-heat so the use of thermostats as an additional control device is completely at the discretion of the installer and is based on installation conditions or requirements.

The Heat-Line heating cable has a conductive polymer core and its heat output changes (increases or decreases) with heat and cold. It is important to understand however, the cable never operates at 0 output and that it is a consumer of energy when powered. Though the heat outputs will change with temperature variables along the pipe, it is consuming power while it is on.

### Where Thermostats Don't Work

In many applications the pipe may exit a building 6-7 feet underground and then come onto or near the earth surface (grade) 50 feet away as rock is encountered. In this application a thermostat is NOT a good idea because the sensor is situated on the pipe under the insulation at the 6-7 foot depth and will not be sampling a temperature indicative of the cold point near the surface 50 feet away. In these applications Heat-Line systems provide the answer as they can operate without a thermostat. Although more costly to run in this type of application, Heat-Line systems efficiently solve the problem, effectively and with energy outputs that are very acceptable. While other systems must have thermostats to prevent over-heating, Heat-Line systems easily solve this problem because they are self-regulating.

### Where Thermostats Work

If your pipe is shallow buried or on the surface and if you can get the thermostat sensor on the pipe in a proper location (cold section of pipe) we can add duty cycling and maintain the pipe at 50°F. You have to understand that a thermostat on a pipe can only read a temperature at a single point and this has always been a problem for other systems because it is somewhat inaccurate and overheating can occur (this is why they can't be safely insulated). With this in mind, you can also understand that because our systems are self-regulating we can completely insulate them without pipe over-heating concerns (decreases heat output with warmth). A thermally insulated pipe is not as susceptible to freezing and temperature change and the insulation adds thermal consistency and efficiency throughout the pipe length.

When a thermostat is located on the pipe under the insulation the system can duty cycle and come on as required by the thermostat. The insulated pipe causes the system to come on periodically for short periods of time and although the pipe may cool more quickly in some areas away from the thermostat the self-regulating heating cable addresses this with more heat in the cooler areas when "on cycle".

Your system will cycle on and off based on outdoor ambient - when it does the heating cable addresses temperature variables along the pipe and the system shuts down. It remains off for extended periods of time because of the thermal insulation which is where the BIG savings come in.

Heat-Line is a registered trademark of Heat-Line Corporation.

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