



POWER SUPPLY

Just plug it in. Only a 120 volt duplex receptacle is required for systems up to 250 feet. A dedicated circuit is recommended. There are no costly wiring expenses as with other systems.

Ground fault equipment protection, is one of the greatest safety achievements made in the electrical industry. Heat-Line® has been using this technology since inception. It is now a heat tracing standard through the regulatory agencies.

Every Heat-Line® system contains an integral ground fault device in each cord set. This device is designed to shut the system down should the electrical components become damaged.

This device has test and reset buttons along with a pilot light to indicate the system is on and functioning correctly. This plug does not require resetting, even after a power failure.

Other power supply configurations are also available.

THERMOSTATS

There are thermostats available to fit various application requirements. All thermostats can increase energy efficiency or provide on/off operations.

HEAT-LINE® EXT SYSTEMS

EXT systems are external systems for freeze protection of pipes from the outside. Paladin®, EXT3T and EXT5R are self-regulating heating cable systems for use on metal or plastic pipes, sewage pipes, forced mains, copper, plastic or galvanized supply pipes.

These systems carry all of the features of Heat-Line® and Retro-Line® except they are installed on the pipe. Combined with Heat-Line®'s exclusive end seal boot technology they are the only systems compatible for direct earth burial and protection of small diameters drainage ducts.

For more information on EXT systems please see our Paladin® and EXT Series brochure.



APPLICATIONS

Heat-Line® products are the most advanced systems of their kind. These products are highly engineered and designed to suit different applications including cottages, resorts, farms, mines and trailer parks. Never before has winter water been so safe, simple, reliable and energy efficient.

Heat-Line® and Retro-Line® systems are freeze protection for domestic water supply systems, adaptable to all areas where natural frost protection cannot be achieved. Even pipes over rock and exposed to atmospheric air temperatures below -40 degrees can now permit freewater flow all year long because of Heat-Line®'s ability to be insulated. This, combined with Heat-Line®'s exclusive self regulating heater, make these systems the finest you can buy.

HEAT-LINE®

The original and only cCSAus approved self-regulating (4A and 4B) freeze protection system. Heat-Line® is pre-piped, pre-assembled and comes job ready for new installations. As with all Heat-Line® products, this system comes complete with the necessary plumbing and electrical fittings for new installations.

Available with 1 inch and 1 1/4 inch CSA pipe. Lengths from 10 feet (3m) to 300 feet (91m).

Also See CARAPACE® at www.heatline.com

CARAPACE® has been developed for higher pressure, submersible pump, constant pressure and municipal freeze protection systems. CARAPACE® is also available in longer system lengths.

HEAT-LINE® INSULATION

Heat-Line® knew that insulation was a key factor in conserving energy. In 1988, Heat-Line® was first to produce an insulated freeze protection system, that would not overheat.

The self-regulating heating cables employed in every Heat-Line® system provide the unique performance to achieve this. They increase heat output as the surrounding media (water or air) cools and conversely they decrease heat output as this surrounding media warms. When heat output is decreased, energy is saved.

When we insulate the pipes the heat-loss to the outside is massively reduced. This allows the pipe to retain or hold in the heat, reducing the heater output and therefore reducing energy costs.

Heat-Line® products work best when insulated, creating the retained heat principal. The insulation will slow the passage of heat energy escaping to the outside, while causing the heater to reduce energy output.

Conventional systems DO NOT self-regulate, and they can overheat if insulated. Since they should not be insulated, larger watt density heaters are required to do the same job. These conventional systems prevent freezing, but they rely on massive heat loss (energy loss) to prevent over heating and pipe burn out.



Uninsulated pipe with heating cable.



Insulated pipe with heating cable.



Heat-Line® & Retro-Line®

by Heat-Line®

Heat-Line® and Retro-Line® systems, developed in 1988 are the most advanced and reliable internal water pipe freeze protection systems available on the market.

WINTER WATER ANYWHERE ANYTIME



CABLE CONSTRUCTION OPERATION

SELF-REGULATION

In developing the most advanced freeze protection for your water supply systems, Heat-Line® required the unique performance, and operating characteristics of technologically advanced, self-regulating heaters. These heaters, or **WARM PIPE:** some conductive paths. **REDUCED HEAT OUTPUT.** which automatically adjusts, increasing or decreasing heat output to match heat loss, at each point throughout their length. Only Heat-Line® employs this technology.

Every Heat-Line® product is built around this technology, producing a system that can be completely enclosed in insulation, while preventing maintenance costs due to HOT-SPOTS or BURN-OUTS. A Heat-Line® product WILL NOT overheat, even when insulated. Because of this, Heat-Line® systems are ideal for wet or dry pipe systems, such as drain back installations and sump pump lines.

SELF-REGULATING CONDUCTIVE CORE

ELECTRICAL INSULATING JACKET

BRAIDED TINNED COPPER SHIELD

PROTECTIVE OUTER JACKET



HEAT-LINE® BOOT TECHNOLOGIES

Heat-Line® systems are pressure sealed with an exclusive end seal technology that has been tested by CSA to withstand pressures up to 75 PSI. For high pressure or constant pressure systems see CARAPACE® at www.heatline.com.



CONTROL OPTIONS

Controls can be used to suit personal requirements or to increase system efficiency where applicable. Heat-Line® systems are the only systems where any control options can be employed. The control selection can be anything from a simple switch or thermostat, to timers, computer controllers or telephone control and monitoring devices.

PLUMBING CONNECTION

In order to make the plumbing job simple, we use the outstanding performance and flexibility of the Philmac system. The fitting simply tightens with a wrench and is designed to connect polyethylene pipes positively, using compression devices and O-Rings.



RETRO-LINE®

Retro-Line® is a simple "job ready" system to protect existing water pipes from freezing, without their removal. **Retro-Line®** features the same self-regulating performance as **Heat-Line®**, without the pipe.

In order to make **Retro-Line®** easy to install, Heat-Line® developed a unique patented dispensing system called "Retro-Reel" to deploy the product with absolute ease, while protecting the heater from mechanical injury during installation.

Short **Retro-Line®**s can simply be pushed into the pipe while longer systems may be pulled in, using a fish tape. The downward end of the cable does not need to be fastened and this is extremely important as it renders the system fully serviceable.

When ordering **Retro-Line®**, only the pipe size & length are required. System lengths are 120 volt up to 250 feet (76m) & 240 volt up to 550 feet (168m). For pipes up to 2 inches in diameter.

FIVE YEAR WARRANTY

All Heat-Line® systems are covered by our exclusive full 5 year limited warranty. The finest warranty in the business.



THERMOSTATS

Companies with old technology, claim that their systems are efficient because they are controlled by thermostats. The simple fact is, unless conditions are ideal which is rarely the case, thermostats can not accurately control the system efficiently. What other companies don't tell you is that their systems must have thermostats to prevent overheating and that these thermostats are high limit devices required by regulatory agencies.

Think about how a thermostat works. In our homes they work great, controlling our heating systems. This is because they are located in a central location, cycling the furnace on and off, allowing the building to heat evenly. On a pipe it's completely different. The pipe is long and it passes through environments that vary in soil depth and exposure to cold. Many pipes come out of the basement protected by warmth of the ground below the frost line. As these pipes travel toward the water source they often rise near grade or even above rock and into the air. With these old technologies, the thermostat sensor must be placed on the pipe just outside the wall in the warm earth. The pipe will freeze where it exits the ground before the system even turns on. The only way to compensate for this problem, is to turn the thermostat up and this is very energy expensive because you must apply huge amounts of energy throughout the line to compensate for the coldest section. In these cases Heat-Line® compensates without thermostats by applying low amounts of heat where and when needed.

Heat-Line® systems do not require thermostats and in applications where thermostats won't work, only Heat-Line® will. In ideal cases thermostats may increase energy efficiency. In these cases, thermostatic control options can be used with Heat-Line®. The use of thermostats is governed only by your application requirements.

**Once these applications are understood
Heat-Line® systems will out-perform all products.**

Various thermostat options available.



HEAT-LINE® AT A GLANCE

- Nothing can be more reliable or energy efficient.
- Five year warranty.
- No need to excavate below the frost line.
- **Heat-Line®** can be fully insulated to increase efficiency and decrease energy costs in temperatures below -40 degrees.
- **Heat-Line®** will never melt or burn out your water pipe, even if the pipe is dry.
- Heat-Line® systems are available in 120 volt or 240 volt.
- **Retro-Line®** can be easily installed in most existing polyethylene pipes, without their removal.
- Fast Installation - **Retro-Line®** comes ready to use, on a special patented dispensing reel, which provides excellent installation performance.
- Internal systems come complete with Philmac® fittings to make pressure connections simple.
- **Heat-Line®** comes with 75 PSI pipe in 1 inch or 1 1/4 inch sizes. From 10' to 300' in length.
- **Retro-Line®** is available to fit existing polyethylene pipes from 3/4 inch to 2 inch systems from 6' to 550' in length.
- **Heat-Line®** and **Retro-Line®** systems are cCSAus approved.

SPECIAL REQUIREMENTS

Since 1988 Heat-Line® has been specializing in freeze protection of all types. If you have a special application of any kind, give us a call. Special system designs are common to us. We manufacture many other innovative products not mentioned in this brochure.

Heat-Line® and **Retro-Line®** are registered trademarks of Heat-Line® Corporation.

For more information contact



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