



# **HotLine™ Internal Water Pipe Heater Installation Manual**

*Prevent Frozen Pipes For Good ... No Digging. No Wrapping. No Problem!*

☎ (877) 881-2980

## **HotLine™ Internal Pipe Heater Water Line Installation Manual**

### **General HotLine Internal Water Line Heater Installation Instructions**

The HotLine Internal Water Line Heater is an economical, "set-it-and-forget-it", pipe-freeze protection device.

Just install it, plug it in, and leave it plugged in until freezing temperatures are over for the year.

For most HotLine lengths, your water and sewer pipes will be protected from freezing for just pennies per day.

The HotLine heating element consists of an insulated modern alloy resistance wire encased in a copper or plastic tube for protection of water and sewer lines. The excellent heat conductivity of the tube delivers heat directly into the water or sewer line where it is needed most.

The following instructions will enable you to select the length and install the HotLine heating element. When installed properly, the HotLine Internal Pipe Heater will be dependable, trouble-free, and - as long as it's plugged in - provide excellent freeze protection for many years.

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# HotLine Internal Pipe Heater Installation Instructions For Water Lines

## Installation Criteria

To install the HotLine heating element successfully in the incoming water line, the line should be at least a 3/4" minimum diameter pipe with long sweeping bends.

The water pipe must be clear and open from the water main, water meter or shut off valve box, into the warmth of the home.

The HotLine heating element cannot be installed through valves or sharp bends. Minimum radius of any bends needs to be at least 4".

For copper and iron pipe, the HotLine heating element can only be used in cases of straight runs, as the HotLine Internal Pipe Heater element will not make the sharp bends of copper or iron elbows.

The HotLine heating element can not be retrofitted to fit into existing outside wall distribution piping, unless the original installation was designed to accept the HotLine heating element. Such as: adequate pipe size (3/4"), access to the end of the pipe, and straight runs without elbow and shut off valves.

## Requirements to determine the length of the Hotline heating element:

To measure for the required length of HotLine heating element, it will be necessary that the proper tools be used to determine the clear inside length of the water pipe to be protected.

❗ *HotLine heating elements are engineered for the specific length ordered and can not be modified or cut after manufacturing.*

The most accurate way is to use an electrician's fish tape, (this item can be purchased at a hardware store, or a home construction supply store).

If Item #(C) and #(D) as noted below and on the enclosed drawing are not installed, they need to be installed by the owner/plumber to help determine the correct length required.

## 🔧 Tools required:

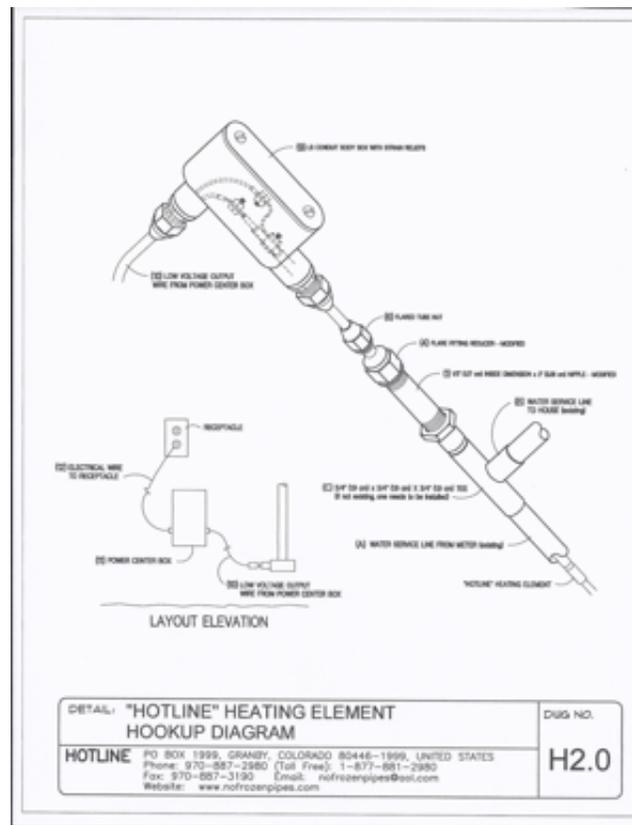
» 100' - 0" (plus) electrician's fish tape

» 100' - 0" tape measure

### Measuring Procedure:

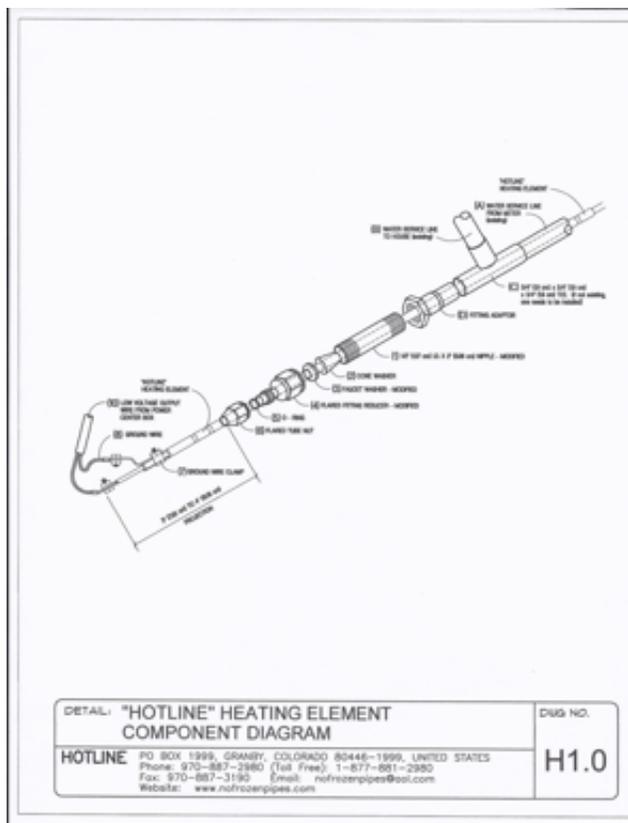
1. Insert the electrician's fish tape through the bushing #(D) and flush adapter fittings #(E) until it hits the closed valve.
2. Pull back the electrician's fish tape 2 inches and mark at the face-edge of the flush adapter fitting.
3. Then pull back the electrician's fish tape approximately 2 feet and reinsert to verify the first measurement was correct.
4. Measure the fish tape with a continuous tape to determine the correct length required.

### Hookup Diagram:



*Hookup Diagram*

### Component Diagram:



*Component Diagram*

### Items You Need:

- A. Water service line from meter (existing)
- B. Water service line to house (existing)
- C. 3/4" x 3/4" x 3/4" Tee (if not existing, one needs to be installed)
- D. Fitting adapter (1/2" plug to be installed after measurements are taken)

\* Items A and B are assumed to be existing.

\*\* If Items C and D are not existing, these fittings will be installed by the owner/plumber to facilitate access for measuring length required and insertion of HotLine heating element.

### Items furnished with the HotLine heating element:

1. 1/2" inside dimension x 2" nipple — modified
2. Cone Washer
3. Faucet Washer — modified
4. Flared Fitting Reducer — modified
5. O – Ring
6. Flared Tube Nut
7. Ground Wire Clamp
8. Ground Wire

9. LB Conduit Body Box with Strain Reliefs
10. Low Voltage Output Wire (Black [5.1] and White [5.2]) from Power Center Box (transformer)
11. Power Center Box
12. Electrical Wire to Receptacle

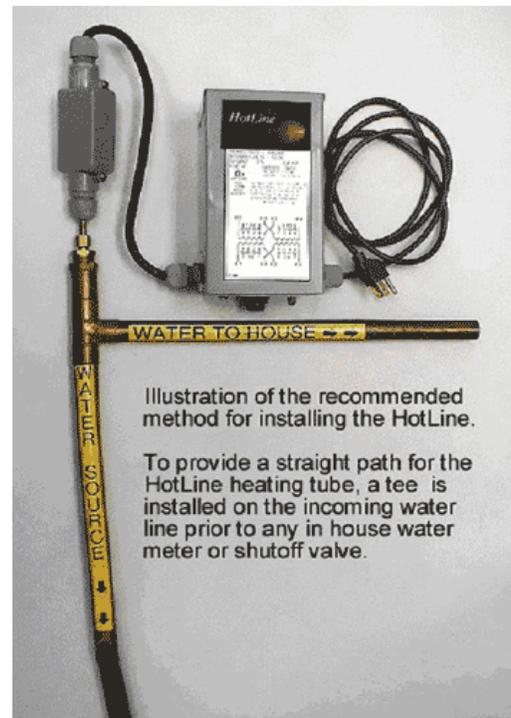
## Water Line Installation:

When installing the HotLine heating element, verify that all the fittings and compression seals are in place on the heating element tube in the order as shown on the enclosed isometric drawing.

The HotLine Power Center box should be located out of the weather, less than five feet (1.524m) from an electrical outlet and within two feet (.6096m) of the HotLine heating element.

The HotLine Power Center box should be anchored to a secured element with screws through the flanges at the top of the Power Center box after assembly and installation. Screws and proper anchors are furnished by the owner or plumber.

- » Shut off the water and remove the 1/2" plug from the fitting adapter.
- » Then carefully unwind the coil from the tip end as you are putting the tip end of the heating element tube into the water pipe.
- » **!** Do not pull the HotLine Internal Pipe Heater element off the side of the coil - *Unroll Only!*
- » **!** Do not bend it sharply and do not kink or smash the heating element tube. **Doing so will VOID the warranty.**
- » Keep the HotLine Internal Pipe Heater element as reasonably straight as possible as you unwind. It will easily slip into place if kept straight.
- » **!** If your HotLine is longer than 50 feet you will need assistance installing it:
  1. Tape a nail to the end of the electrician's fish tape, or use a plumber's camera.



*Recommended method for installing the HotLine Internal Pipe Heater Power Center*

2. On the 50 feet or longer HotLines you will find an eyelet on the tip end.
  3. Take a small piece of string and put it through the eyelet and tie a knot.
  4. Then with the electrician's fish tape, slide the nail through the string and slowly start to insert the HotLine in the water line by pushing on the fish tape or camera.
  5. Once the HotLine is installed, give a slight jerk on the fish tape or camera to release the HotLine from the fish tape or camera.
  6. Then, pull out the fish tape or camera and your HotLine will be installed. **DO NOT WORRY ABOUT THE STRING AS IT WILL JUST FLOAT IN THE WATER LINE.**
- » Then install and secure in place, Item (1) ½" Inside Dimension, X 2" NIPPLE — MODIFIED, into the fitting adapter using TEFLON tape or pipe joint compound and tighten.
  - » Remove the LB conduit body box cover and gasket and set aside to be reinstalled after wires are connected.
  - » The HotLine Internal Pipe Heater element should project approximately 2' - 0" to 3' - 0" out from face of the nipple for ease of connecting the wires within the LB conduit body box (Item #11 above).
  - » Push the HotLine Internal Pipe Heater element through the strain reliefs for ease of connecting the wires together.

**Make and enclose the following connections within the LB conduit body box (Item #11 above).**



Using the nuts and bolts that are attached to the end of the HotLine heating element:

- » Connect the white wire of the low voltage output wire from the power center box to the copper ground wire clamp of the HotLine heating element.
- » Connect the black wire of the low voltage output wire from the power center box to the center insulated modern alloy resistance wire of the

HotLine heating element.

- » After the low voltage output wires have been connected, pull the connection back into the LB conduit body box (Item #11 above).
- » **!** Make sure these connections are not touching each other inside the box as they could short out!
- » Tighten the LB conduit body box strain reliefs onto the HotLine heating element and the low voltage output wire.
- » Then install the LB conduit body box cover and gasket.

**With the electrical hook up complete, push the HotLine heating element into the water service line. Tighten the fittings in the following order:**

1. (1) 1/2" inside dimension x 2" nipple — modified
2. (4) flared fitting reducer — modified
3. (6) flared tube nut

The last connection to be made is to plug the power cord into the nearby 120 Volt outlet.

This completes the plumbing installation. The HotLine Internal Pipe Heater can be put into service.

**! WARNING:**

- » Do not connect the HotLine heating element directly to any 120 Volt outlet.
- » The HoltLine Internal Pipe Heater must operate only from the supplied HotLine heating element Power Center box.
- » The top of the power center box may reach 176° F (80° C).

**Other considerations:**

The HotLine Power Center box contains an indicator light, operates on 120 Volts (240 Volts), and provides a low voltage output to the HotLine heating element.

The fuse which protects the 120 Volt (240 Volts) winding of the power center box may be changed without opening the Power Center box.

❗ *There is no need to ever open the Power Center box!*

There are no required hookup connections within the HotLine Power Center box.

The HotLine Power Center box should be located out of the weather, less than five feet from an electrical outlet and within two feet of the HotLine heating element.

The HotLine Power Center box should be anchored to a secured element with screws through the flanges at the top of the Power Center box. Screws and proper anchors are furnished by owner or plumber.

All HotLine heating element equipment has been designed and fabricated for continuous operating service.

The HotLine heating element can operate in a wet or dry atmosphere (inside the water pipes) without reducing the life expectancy of the pipes.

If need help with your installation please call [\(877\) 881-2980](tel:877-881-2980) for assistance.