INSTALLATION INSTRUCTION SHEET

WATER PIPE HEATING CABLE

This product has been designed, manufactured and instructions written for the sole use of preventing water pipes from freezing. Improper installation, use and/or maintenance of electrical heating cable can cause fire, electric shock and/or freezing of pipe.

This product will prevent water filled pipes from freezing. It can be used on plastic or metal supply pipes. Do not use on drain lines, fuel lines or hoses. The cable should not be buried or come in contact with the ground. Follow the selection chart carefully and do not oversize the cable. The cable should not be wrapped or spiraled and must be placed flat to the pipe using electrical tape rated for temperature. The entire installation should be wrapped with ½" fiberglass pipe insulation. Follow the enclosed installation instructions closely.

This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

WARNING: Use on water pipes only and comply with these important instructions. Minimum pipe length is 3 feet.

PRECAUTIONS

1. If after reading the following instructions, you still have questions regarding installation or operat ion of this heating cable, call toll-free (800) 654-8454 for assistance. M-F, 8:00 AM – 5:00 PM CST.
2. Heating cables must be installed in compliance with all National, State, Provincial and Local Codes. Check with your local electrical inspector for specific details.
3. These instructions must be saved and made available to the owner and transferred to future owners. Before starting, be sure you have selected the correct length heating cable for the pipe to be protected, see Selection Guide.

ADDITIONAL MATERIALS REQUIRED

Application tape/electrical tape, 1/2-inch fiberglass or equivalent nonflammable pipe insulation with vapor seal.

SELECTION GUIDE

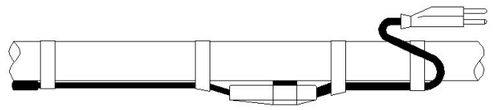
Choosing the right length of pipe freeze protection cable:
Cable should be long enough to run along bottom of horizontal pipes and "weather side" of vertical pipes (including valves) without crossing or spiraling. Never use a cable longer than the pipe it is intended to protect.

1. Measure the length of pipe to be protected, including valves.
2. Cable will be applied straight along pipe, and will protect pipes up to 1-1/2 inches in diameter.
3. For pipe lengths other than standard heating cable sizes, use two heating cables in parallel on opposite sides of the pipe (see illustration). Maximum "overrun" should not exceed 3 feet. Do not install on pipe shorter than three feet.

RECOMMENDED CABLE SIZES

Pipe Length	Pipe Diameter from 3/8″ to 3/4″	Pipe Diameter from 1″ to 1 1/2″
	Cable Length	
3′	3′	3′
4-5′	3′	3′ parallel with 3′
6′	6′	6′
7-8′	6′	3′ parallel with 6′
9′	9′	9′
10-11′	9′	6′ parallel with 6′
12′	12′	12′
13-14′	12′	6′ parallel with 9′
15′	6′ and 9′	9′ parallel with 9′
16-17′	9′ parallel with 9′	9′ parallel with 9′
18′	18′	18′
19-20′	18′	9′ parallel with 12′
21-23′	12′ parallel with 12′	12′ parallel with 12′
24′	24′	24
25-26′	24′	9′ parallel with 18′
27′	9′ and 18′	12′ parallel with 18′
28-29′	12′ parallel with 18′	12′ parallel with 18′
30′	30′	30′

STANDARD LENGTHS



9 feet of 1/2 inch pipe 9′ cable

To protect a pipe with a standard length of heating cable, apply the cable straight along the bottom of horizontal pipe or the "weather side" of vertical pipe following installation instructions.

NONSTANDARD LENGTHS

17feet of 1 inch pipe 9′ cable

For pipe diameters from 3/8 inches to 3/4 inches, cable can be up to 2 feet shorter than pipe. For pipe diameters from 1 inch to 1-1/2 inches, apply two separate cables on opposite ends following installation instructions. Overrun in the middle of the pipe should not exceed 3 ft.

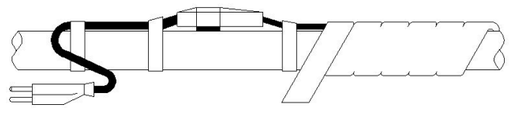
WARNING: The following nine points must be strictly adhered to. Failure to do so could cause overheating and result in serious fire hazard or electrical shock.

1. **Never** plug in the heating cable while it is coiled.
2. **Never** install so that external heat source(s) might overheat installation. Do not use heating cable on pipes heated above 155℉ such as steam lines.
3. **Never** alter this heating cable in any way. If made shorter, it will overheat. Any attempt to physically alter the heating cable will void the warranty. Once cut, the heating cable cannot be repaired.
4. The thermostat and the entire heating cable must be in contact with the pipe.
5. **Never** use metal binding to secure heating cable to pipe.
6. **Do not** install the same cable on more than one pipe. This could cause the heating cable to overheat and may result in fire or electrical shock.
7. **Never** allow heating cable to touch, cross or overlap itself at any point. This will cause the heating cable to overheat and could result in fire or electrical shock.
8. **Never** install heating cable in walls, floors or ceiling.
9. Combustible material must not be within 1/2 inch (13mm) of completed installation.

TOOLS REQUIRED

Scissors Tape measure File Marking Pencil Eye protection

GENERAL INSTALLATION INSTRUCTIONS



Water Pipe Heating Cable on Metal Water Pipe (See "Special Notes for Plastic Pipes" below.)

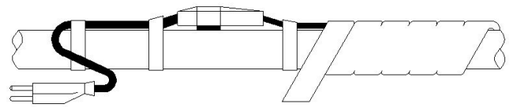
WARNING: Always wear safety glasses during installation.

1. Read through the entire instruction sheet before you begin. Make sure you have selected the correct length of heating cable.
2. Before applying the heating cable, make sure that the area on and around the pipe is free and clear of sharp edges and combustible materials. Remove old heat tapes before proceeding and use the file to remove any sharp edges.
3. If heating cable is stiff (due to cold), first uncoil it and then plug it into a 120 volt outlet until it is warm and pliable before unplugging it and applying it to the pipe. The minimum installation temperature of the cable is 14℉(-10℃). Never install the cable when the cable is colder than this temperature.
4. Make sure there is a properly grounded electrical receptacle close enough to plug in the cable. We strongly recommend the use of a GFCI protected circuit. Use on 120 volts only and be sure the electrical outlet is not overloaded. This heating cable will consume five amps or less of electricity. If an extension cord is necessary, use only a properly sized, grounded, CUL/UL Certified cord suitable for outdoor service.
5. The thermostat (the splice between the heating cable and non-heating cable) must be placed tightly against the pipe and secured with good quality electrical tape. The thermostat should be placed on the coldest end of the pipe. The thermostat will sense the temperature of the pipe and turn the cable on and off to provide economical operation.
6. Apply application tape or good quality electrical tape at six inches intervals to secure the heating cable straight along the pipe. Minimum heating cable bend radius is 1″ (25.4mm).

WARNING: Always use application tape or a good quality electrical tape. Other adhesive tapes may allow the cable to move at normal cable operating temperatures and could result in overheating, fire or electrical shock.

7. Maximum 1/2 inch fiberglass insulation must be used over the heating cable for lower temperature protection. Insulation applied over the heating cable must also be applied over the thermostat. Insulation must be protected with an additional waterproof overwrap using opposite spiraling.

CONTINUE WRAPPING UNTIL THERMOSTAT IS COVERED



WARNING: We recommend the use of a ground fault circuit interrupter (GFCI) receptacle or circuit breaker to reduce the danger of fire or electrical shock from a damaged or improperly installed heating cable. Electrical fault current caused by a damaged or improperly installed cable may not be large enough to trip a conventional circuit breaker. If you do not know whether your electrical circuit is protected by a GFCI, always consult an electrician.

NOTE: Many mobile home heat tape receptacles are not protected by a GFCI.

WARNING: Never use more than 1/2 inch of fiberglass or other non-flammable insulation made for pipe application. Over-insulation can cause the heating cable to overheat and cause serious fire hazard or electrical shock.

SPECIAL NOTES FOR PLASTIC PIPE INSTALLATION

WARNING: Never install heating cable on plastic pipe unless pipe is filled with water at all times. **Never** spiral heating cable on pipes. Keep the heating cable straight along the pipe. In order to obtain even heat distribution, we recommend wrapping plastic pipes with aluminum foil before applying the heating cable.

MAINTENANCE

1. At the beginning of the heating season and monthly during operation, inspect the heating cable and its connection to the electric power source. Discontinue use and remove any unit that has been cut, damaged, immersed in water, shows any evidence of charring or cracking, or has deteriorated for any reason. Other conditions to look for are chewing by animals, debris thrown from lawnmower or any physical abuse. This cable does not contain any serviceable parts.
2. Heating cable may remain on the pipe year round, but we recommend always turning off or disconnecting the power at the end of the season (when air temperatures remain above 50℉). The thermostat turns the heating cable on when exposed to temperatures below 38℉. It will shut the heating cable off when the pipe has been heated to a temperature of approximately 50℉.

HOW TO KNOW YOUR CABLE IS WORKING

Your heating cable is equipped with a light in the plug. This light indicates that power is available to the cable. If this light is not on, check the power supply to the cable; it is possible that the breaker or GFCI is tripped.

To check if an installed heating cable will work in freezing conditions, complete the following steps:

1. Plug in the cable.
2. Remove the fiberglass insulation from the thermostat area.
3. Wrap a bag of ice around the thermostat.
4. Wait about 20 minutes.
5. The cable should now feel warm to touch.

LIMITED WARRANTY AND LIABILITY

The manufacturer warrants that if there are any defects in material or workmanship in this product during the first twelve (12) months after the date of its purchase, we will replace the product with an equivalent model, not including any labor or other installation costs.

Our obligation to replace the product as described above is conditioned upon (a) the installation of the product conforms to the specifications set forth in our installation instructions and (b) the product not having been damaged by unrelated mechanical or electrical activities.

Product replacement as described above shall be your sole and exclusive remedy for a breach of this warranty. This limited warranty does not cover any service costs relating to repair or replacement.

We shall not be liable for any incidental, special or consequential damages as a result of any breach of this warranty or otherwise, whether or not caused by negligence. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

The warranty above is exclusive and makes no other warranties with respect to description or quality of the product. No affirmation of fact or promise made by us, by words or action, shall constitute a warranty. If any model or sample was shown to you, the model or sample was used merely to illustrate the general type and quality of the goods and not to represent that the goods would necessarily be of that type or nature. **No agent, employee or representative of ours has authority to bind us to any affirmation, representation or warranty concerning the goods sold unless such affirmation, representation or warranty is specifically incorporated by written agreement.**

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE THAT MAY ARISE IN CONNECTION WITH THE SALE OF THIS PRODUCT SHALL BE LIMITED IN DURATION TO TWELVE (12) MONTHS FROM THE DATE OF PURCHASE. WE DISCLAIM ALL OTHER IMPLIED WARRANTIES, UNLESS WE ARE PROHIBITED BY LAW FROM DOING SO, IN WHICH CASE ALL SUCH IMPLIED WARRANTIES SHALL EXPIRE AT THE EARLIEST TIME PERMITTED BY APPLICABLE LAW. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

To obtain a replacement under this warranty any inoperative product or component must be returned, with proof of purchase, to the manufacturer at the address noted herein. Buyer is responsible for all costs incurred in removal and re-installation of product and must pre-pay shipment to factory or point of purchase.

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