



HEATING CABLE

AUTOMATIC ELECTRIC WATER PIPE HEATING CABLE INSTALLATION INSTRUCTIONS

SELECTING THE CORRECT CABLE LENGTH	Pipe diameter from 3/8" (9.5 mm) to 3/4" (19.0 mm)	Pipe diameter from 1" (25.4 mm) to 1-1/2" (38.1 mm)
	Quantity / Part #	Quantity / Part #
3' (0.9 m)	1 / 31003	1 / 31003
4-5' (1.2-1.5 m)	1 / 31003	*2 / 31003+31003
6' (1.8 m)	1 / 31006	1 / 31006
7-8' (2.1-2.4 m)	1 / 31006	*2 / 31003+31006
9' (2.7 m)	1 / 31009	1 / 31009
10-11' (3-3.4 m)	1 / 31009	*2 / 31006+31006
12' (3.7 m)	1 / 31013	1 / 31013
13-14' (4-4.3 m)	1 / 31013	*2 / 31006+31009
15' (4.6 m)	1 / 31015	1 / 31015
16-17' (4.9-5.2 m)	1 / 31015	*2 / 31009+31009
18' (5.5 m)	1 / 31018	1 / 31018
19-20' (5.8-6.11 m)	1 / 31018	*2 / 31009+31012
21-23' (6.4-7 m)	*2 / 31013+31013	*2 / 31013+31013
24' (7.3 m)	1 / 31024	*2 / 31024
25-27' (7.6-8.2 m)	1 / 31024	1 / 31012+31015
28-29' (8.5-8.8 m)	*2 / 31015+31015	*2 / 31015+31015
30' (9.1 m)	1 / 31030	1 / 31030
40' (12.2 m)	1 / 31045	1 / 31045
60' (18.3 m)	1 / 31060	1 / 31060
80' (24.4 m)	1 / 31080	1 / 31080
100' (30.5 m)	1 / 31100	1 / 31100

*When using 2 cables, overlap cables with overrun zone on opposite side of pipe. Overrun zone should not exceed 3' (0.9 m)



WARNING This safety alert symbol indicates important safety messages in this manual. When you see this symbol, please 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' (0.9 m).

PRECAUTIONS

1. If after reading the following instructions, you still have questions regarding installation or operation of this heating cable, call toll-free 800 361-3773, Monday to Friday 8am to 5pm EST.
2. Heating cables must be installed in compliance with all 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 cables for the pipe to be protected (see Selection Guide).

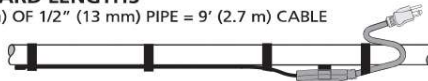
SELECTION GUIDE

Choosing the right length of pipe freeze protection cable: Cable should be long enough to run along the 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. Refer to the Selection Chart for proper cable selection.
2. Measure length of pipe to be protected.
3. Choose proper heating cable model and quantity according to different pipe diameter and length.
4. Cable will be applied straight along pipe and will protect pipes up to 1-1/2" (38.1 mm) in diameter.
5. For pipe lengths other than standard heating cable sizes, use two cables in parallel on opposite sides of the pipe (see illustration). Maximum 'overrun' should not exceed 3' (0.9 m). DO NOT INSTALL on pipe that is shorter than 3' (0.9 m).

STANDARD LENGTHS

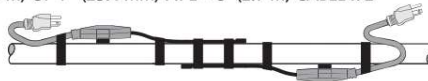
9' (2.7 m) OF 1/2" (13 mm) PIPE = 9' (2.7 m) CABLE



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

NON-STANDARD LENGTHS

17' (5.18 m) OF 1" (25.4 mm) PIPE = 9' (2.7 m) CABLE x 2



For pipe diameters from 3/8" (9.5 mm) to 3/4" (19.0 mm), cable can, be up to 2' (50.8 m) shorter than pipe. For diameters from 1" (25.4 mm) to 1-1/2" (38.1 mm), apply two separate cables on opposite sides of the pipe, starting from opposite ends - following installation instructions. Overrun in middle of the pipe should not exceed 3' (0.9 m).

WARNING The following nine points must be strictly adhered to. Failure to do so could cause overheating and result in a 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°F (68°C) 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 ceilings.
9. Combustible material must not be within 1/2" (13 mm) of completed installation.

GENERAL INSTALLATION INSTRUCTIONS



Automatic pipe heating cable on metal water pipe. (see 'Special Notes for Plastic Pipe' 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 a file to remove any sharp edges.
3. The minimum installation temperature of the cables is -15°F (-10°C). NEVER install the cable when the pipe is colder than this temperature. If heating cable is stiff (due to cold), first uncoil it and plug it into a 120v outlet until it is warm and pliable before unplugging it and applying it to the pipe.
4. Make sure there is a properly grounded electrical receptacle close enough to plug in the cable. A GFCI protected circuit should be used. Use on 120 volts only and be sure the electrical outlet is not overloaded. This heating cable will consume 5 amps or less of electricity. If an extension cord is necessary, use only a properly sized, grounded, cUL/CSA Certified cord suitable for outdoor service.
5. The thermostat (the black cap in the orange block) 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 CSA approved electrical tape at 6" (0.15 m) intervals to secure the heating cable straight along the pipe. Minimum heating cable bend radius is 1/4" (6 mm).

WARNING Use CSA approved electrical tape with a minimum of 176°F (80°C) temperature rating. 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" (13 mm) fiberglass (including pre-formed 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 additional waterproof overwrap using opposite spiraling.

8. Before operating the heating cable, the installer should complete the record of purchase form.

⚠ 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" (13 mm) 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.

⚠ WARNING Metallic surfaces that may come in contact with the heating cable be grounded in accordance with the Canadian Electrical Code or other local codes.

SPECIAL NOTES FOR PLASTIC PIPE INSTALLATION

⚠ WARNING NEVER install heating cable on plastic pipe unless pipe is filled with water at all times. Use plastic (including PEX tubing) piping material suitable for residential water applications. 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 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°F [10°C]). The thermostat turns the heating cable on when exposed temperatures below 38°F (3°C). It will shut the heating cable off when the pipe has been heated to a temperature of approximately 45°F (7°C).

HOW TO KNOW YOUR CABLE IS WORKING

⚠ WARNING Plugging in a cable that is coiled or overlaps itself could cause overheating and result in electrocution or fire. Your heating cable is equipped with a light in the plug. This light indicates that the power is available to the cable. If the 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.

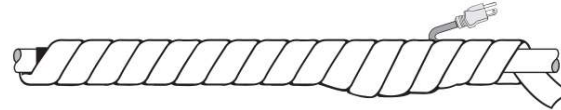
1. Plug in the cable.
2. Remove the fiberglass insulation from the thermostat area.
3. Wrap a bag of ice around the thermostat.
4. Wait about 20 minutes.
5. The cable should now feel warm to the touch.

This product will prevent water filled pipes from freezing. It can be used on water filled plastic or metal supply pipes. **DO NOT** use on drain lines, fuel lines or hoses. The cable **MUST NOT** be buried or come in contact with ground. Follow the selection chart carefully and **DO NOT** oversize the cable. The cable **MUST NOT** be wrapped or spiraled and **MUST BE**

PLACED FLAT to the pipe using CSA approved electrical tape with a minimum 176°F (80°C) temperature rating. The entire installation should be wrapped with 1/2" (13 mm) fiberglass insulation. *Follow the installation instructions carefully.*



CONTINUE WRAPPING UNTIL THERMOSTAT IS COVERED



LIMITED WARRANTY AND LIABILITY

Waterline Products Co. LTD. warrants that if there are any defects in material or workmanship in this product during the first 12 (twelve) months after date of purchase, we will replace the product with an equivalent model, not including any labour or other installations costs incurred.

Our obligation to replace the product as described above is conditioned upon (1) the installation of the product conforms to the specifications set forth in our installation instructions and (2) the product not having been damaged by unrelated electrical or mechanical 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.

Waterline Products Co. LTD. 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 provinces 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 Waterline Products Co. LTD., 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 Waterline Products Co. LTD., has the 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 12 (TWELVE) MONTHS FROM THE DATE OF PURCHASE. WATERLINE PRODUCTS CO. LTDs., 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 LAW. Some provinces 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 may also have other rights which vary from province to province.

To obtain a replacement under this warranty any inoperative product or component must be returned, with proof of purchase, to Waterline Products Co., LTD. You the 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.

Waterline Products Co., LTD.



This product will prevent water filled pipes from freezing. It can be used on water filled plastic or metal supply pipes. **DO NOT USE** on drain lines, fuel lines or hoses. The cable **MUST NOT** be buried or come in contact with the ground. Follow the selection chart carefully and **DO NOT** oversize the cable. The cable **MUST NOT** be wrapped or spiraled and **MUST BE** placed flat to the pipe using electrical tape with a minimum 176°F (80°C) temperature rating. The entire installation should be wrapped with 1/2" (13 mm) fiberglass insulation. *Follow the installation instructions carefully.*



TOOLS REQUIRED:

- SCISSORS • TAPE MEASURE • FILE • MARKING PENCIL
- EYE PROTECTION • WORK GLOVES

ADDITIONAL MATERIALS REQUIRED:

- CSA APPROVED ELECTRICAL TAPE
- 1/2" (13 mm) FIBERGLASS or EQUIVALENT NON-FLAMMABLE PIPE INSULATION WITH VAPOUR SEAL

RECORD OF PURCHASE

Model number: _____

Date purchased: _____

Installed by: _____

Date installed: _____



QUESTIONS?
If you have questions regarding installation, operation or maintenance of this product, call toll-free 800-361-3773 for assistance. Monday through Friday, 8am to 5pm EST.

