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PGE WATER PIPE FREEZE PROTECTION CABLES

This pipe freeze protection cable is comprised of a heating cable, thermostat and power cord and may only be used for freeze protection of metal or plastic water pipes up to 40 mm diameter.

Read carefully and follow these instructions for an efficient, economical and safe installation. We recommend you retain these instructions for future reference.

CAUTION

C1. The heating cable must not touch, cross or overlap itself at any point. This will cause the heating cable to overheat.

C2. The heating cable cannot be altered in length. If made shorter, it will overheat and if made longer, it will produce insufficient heat. Any attempt to physically alter the heating cable will void the warranty. Once cut, the heating cable cannot be repaired.

C3. If the heating cable is stiff (due to cold), FIRST UNCOIL IT and then plug it in for a few minutes until it is warm and pliable before applying it to the pipe. NEVER PLUG IN THE HEATING CABLE WHILE IT IS COILED; this will cause the cable to overheat where it touches itself, and the outer jacketing will melt and then fuse together upon cooling.

C4. Do not install on pipes that are heated to above 66°C (155°F) such as steam lines; these high temperatures will damage the cable.

C5. The heating cable must be spaced at least 13mm from any combustible materials (including combustible insulation) to ensure the prevention of fire.

C6. NEVER use more than 13 mm of fibreglass or polyethylene foam insulation. Overinsulating the heating cable will cause it to overheat. Ensure that insulation is flame retardant type.

C7. The heating cable must be protected from physical abuse if it is installed in locations where it may get damaged (e.g. chewing by animals, debris from lawnmowers, snow shovelling, falling ice, etc.).

C8. Do not spiral heating cable; keep the cable straight along the entire length of pipe.

C9. The heating cable must not be immersed in any liquid.

CABLE AND INSULATION SELECTION

S1. Measure pipe length and diameter

S2. Select the cable closest in size to the pipe length. The cable must be no less than 600 mm shorter than the pipe, and must not be any longer. It is possible to use two cables for one pipe length and these cables may overlap up to 600 mm if placed on opposite sides of the pipe.

S3. Select the insulation to be applied over the heating cable/pipe. A maximum of 13 mm of insulation may be used. Either foamed or mineral wool insulation may be used. Ensure that foam insulation is flame retardant type.

INSTALLATION

I1. Prepare the pipe
Before applying the heating cable, ensure that the area on and around the pipe is free and clear of sharp edges and combustible materials (to minimize the risk of damage to the cable and adjacent areas).

I2. Apply aluminium foil to plastic pipe
If you are applying the heating cable to a plastic pipe, we recommend that you first wrap the pipe with aluminum foil before applying the heating cable. The aluminum foil distributes the heat from the heating cable uniformly around the pipe, as aluminum is a better heat conductor than plastic.

I3. Prepare power supply
For UK installations the two pin plug should be removed. Connection to the mains should be made in accordance with current regulations and by a qualified person. The cable must be earthed.

I4. Position the thermostat
The thermostat (the black cap in the orange block) must be placed tightly against the pipe and secured with PVC electrical tape. Do not use any type of strapping. 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 as required to prevent the pipe from freezing and to provide economical operation.

I5. Apply the heating cable
Using a good quality PVC electrical tape, lay the heating cable on the pipe and fasten it to the pipe at approximately 600 mm intervals.

I6. Insulate the pipe/heating cable
For pipe freeze protection under extremely cold conditions, or for minimizing energy consump-tion, it is recommended that insulation be added to the pipe over the heating cable. The heating cable/pipe may be insulated with either fibreglass or polyethylene foam insulation.

INSULATION MUST BE APPLIED TO THE THERMOSTAT IN THE SAME MANNER AS THE REST OF THE HEATING CABLE/PIPE to ensure that all sections of the pipe are maintained at the same temperature. If the thermostat area is insulated moreso than the rest of the pipe, then the rest of the pipe will not be kept as warm as the thermostat area and may freeze. If the thermostat area is not insulated as well as other areas of the pipe, the thermostat will be turning the cable on for longer periods than necessary, resulting in uneconomical operation. (The thermostat turns the heating cable on when it senses temperatures of approximately 3°C or less, and turns the heating cable off when it senses temperatures of approximately 13°C or more).

FOR MINERAL WOOL INSULATION, A MAXIMUM OF 13 mm of insulation may be applied over the heating cable. It is important to note that mineral wool insulation can be damaged by moisture, hence a waterproof overwrap must be applied to the insulation to prevent moisture penetration.

FOR FOAMED INSULATION, A MAXIMUM OF 13 mm of insulation may be applied over the heating cable. Foamed insulation is usually not affected by moisture, hence waterproofing is usually not required.

17. Connect power at start of cold season
Once the cold/winter season begins, plug the power cord into an appropriate receptacle. (See also “Operation” below)

OPERATION OF THE PIPE FREEZE PROTECTION CABLE

O1. The pipe freeze protection cable contains an automatic thermostat which turns the heating cable on when it senses (falling) temperature of approximately 3°C, and turns the heating cable off when it senses (rising) temperature of approximately 13°C. As a result, the cable does not require any monitoring.

O2. It is recommended that in summertime, the heating cable be disconnected.

O3. It is recommended that just prior to the cold/winter season, the heating cable be inspected for signs of damage and the power supply checked to ensure proper operation. If the heating cable is not damaged and the power supply is operational, then the heating cable may be reconnected.