YeloDeer

PLUG IN·HEAT UP

DGK DrainGuard
IN-PIPE HEATING CABLE KIT

Freeze Protection for Condensate, Ice Maker and Other Drain Lines

INSTALLATION MANUAL



SCAN FOR SUPPORT

At Your Service

Web: www.yelodeer.com

Email: yelodeer@yelodeer.com

To Be the #1 HEATING CABLE BRAND for Homes

PRODUCT OVERVIEW

In cold environments, small-diameter drain lines in buildings, such as condensate drain lines, are prone to freezing. This can lead to blocked drainage, equipment shutdown, and potential water damage. The issue is especially common when drain pipes pass through unheated spaces or are exposed to low ambient temperatures.

This product provides an effective **in-pipe freeze protection solution** by inserting a **CSA-certified self-regulating heating cable** directly into the drain line through a dedicated Y-fitting. By delivering heat inside the pipe, it helps prevent ice formation and maintain reliable drainage.

Unlike conventional external heating methods, this kit uses a specially designed Y-fitting together with a rubber sealing assembly to introduce the heating cable directly into the drain line from the side. This in-pipe design applies heat closer to where ice forms, helping reduce heat loss through the pipe wall and making freeze protection more direct and efficient. It is also especially useful for pipe sections that are difficult or impossible to wrap externally, such as pipes passing through walls, floors, tight spaces, or partially buried areas.

This kit is suitable for **non-pressurized drain lines** in buildings, including but not limited to:

- HVAC condensate drain lines
- Condensing furnace drain lines
- Condensing water heater or boiler drain lines
- Ice maker drain lines
- Humidifier / dehumidifier drain lines
- Other similar low-flow drain applications subject to freezing

The standard configuration is designed for **3/4" drain lines** and can also be adapted for **1/2" drain lines** using the included components.

FEATURES

- **CSA-Certified Self-Regulating Heating Cable:** Adjusts heat output automatically based on surrounding temperature for safe and reliable freeze protection.
- **Y-Fitting Design:** Installed by cutting and replacing a short section of pipe; full pipe replacement is not required.
- **Watertight Sealing:** Rubber sealing assembly secures the heating cable and helps provide a leak-resistant seal without restricting drainage.

● **Low-Temperature Protection:** Helps protect drain lines in temperatures down to **-40 °F (-40 °C)**.

● **Durable Cable Construction:** Fluoropolymer outer jacket offers high temperature resistance and corrosion resistance for indoor and outdoor use.

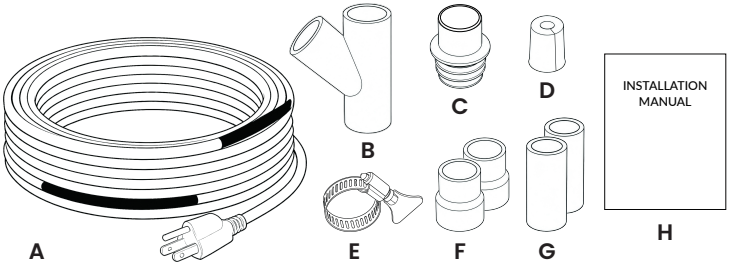
● **Energy Efficient:** Self-regulating design helps reduce unnecessary power consumption.

● **Flexible Cable Routing:** The self-regulating cable may be coiled, spiraled, or overlapped without overheating risk.

TECHNICAL DATA

Heating Cable Specification	
Voltage	120 V AC
Power Rating	3 W/ft @ 50 °F (10 °C) (standard)
	5 W/ft @ 50 °F (10 °C) (optional)
Heating Cable Model No.	PG-3CT1 (3 W/ft), PG-5CT1 (5 W/ft)
Cable Outer Jacket	Fluoropolymer
Min. Working Temperature	-40 °F (-40 °C)
Max. Exposure Temperature	185 °F (85 °C)
Max. Maintenance Temperature	149 °F (65 °C)
Bus Wire Gauge	18 AWG
Cable Dimensions	0.3 × 0.19 in (7.9 × 4.7 mm)
Certification	CSA Certified

KIT CONTENTS



Item	Qty	Description
A	1	Self-Regulating Heating Cable
B	1	Y-Fitting (3/4")
C	1	Rubber Gasket
D	1	Sealing Grommet
E	1	Lock Nut
F	2	3/4" to 1/2" Adapter
G	2	Pipe Nipple (2.35 in / 6 cm long)
H	1	Installation Manual

INSTALLATION INSTRUCTIONS

IMPORTANT

Disconnect all power before installation. Read all safety warnings first.

Tools Required:

Pipe cutter; measuring tape; marker; deburring tool; appropriate primer and solvent cement for PVC or ABS pipe; safety glasses; cut-resistant gloves.

Step 1: Preparation & Safety

1. Shut off power to the HVAC or refrigeration equipment.

2. Locate the freeze-prone section of the drain line.

3. Confirm the pipe material is **PVC or ABS** and the pipe follows **ASTM/NPS standard dimensions** (for example, Schedule 40 or equivalent).

4. The supplied pipe fittings and adapters are made of PVC. Use an appropriate solvent cement compatible with the pipe and fitting materials being installed. When connecting the supplied PVC components to ABS pipe, a transition cement may be required.

5. Confirm the line is a non-pressurized drain line only.

Step 2: Measure, Cut & Prepare the Pipe

1. Measure and Mark

Identify the section of pipe to be removed and mark the cut points.

Recommended cut lengths:	
• 3/4" pipe: 2.75 in (7 cm)	• 1/2" pipe: 8.25 in (21 cm)

Cut conservatively

If the removed section is too short, additional trimming can be done during installation. If too much pipe is removed, proper insertion depth may not be achieved, which may result in weak joints or leakage.

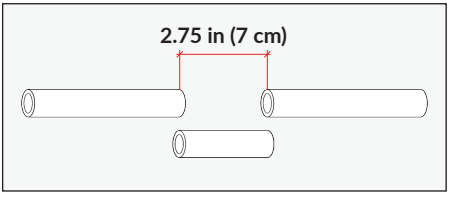
2. Cut the Pipe

Cut the pipe at the marked locations using a pipe cutter or fine-tooth saw.

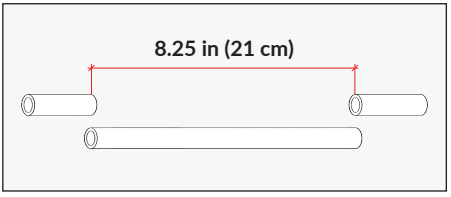
3. Deburr and Clean

Remove burrs and sharp edges to prevent damage to the heating cable. Clean the cut surfaces thoroughly to ensure proper bonding during assembly.

• Ensure both cut ends are smooth, clean, and ready for connection before proceeding to assembly.



3/4" pipe



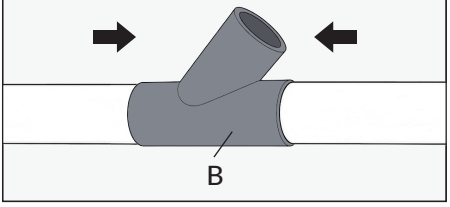
1/2" pipe

Step 3: Assemble the Pipe Components

Structure:

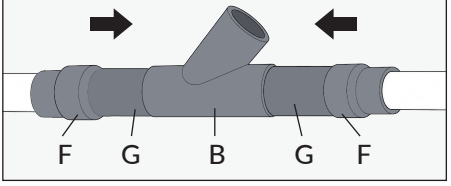
For 3/4" Pipes

3/4" Pipe → Y-Fitting (B) → 3/4" Pipe
(Components F and G are not used.)



For 1/2" Pipes

1/2" Pipe → Adapter (F) → Pipe Nipple (G) → Y-Fitting (B) → Pipe Nipple (G) → Adapter (F) → 1/2" Pipe



Installation:

1. Apply the appropriate primer and solvent cement to all mating surfaces (pipe ends and fitting sockets).

2. Assemble the components according to the selected configuration.

3. Push each connection fully into place.

4. Hold each joint firmly for about 15 seconds to ensure proper bonding.

5. Allow sufficient curing time according to the cement manufacturer's instructions before proceeding.

IMPORTANT

- Use the correct primer and solvent cement for the actual pipe material being installed.
- Ensure all joints are fully seated and aligned before the cement sets.

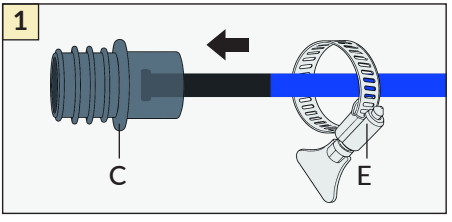
Step 4: Insert Heating Cable

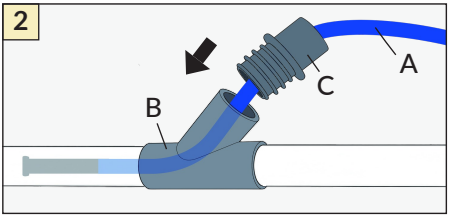
1. Feed the cable end through the **Lock Nut (E)** and **Rubber Gasket (C)**.

2. Insert the cable through the Y-Fitting port and into the drain pipe. Route the cable to cover all sections that may be exposed to freezing conditions.

Note:

- The cable does not need to be fully inserted into the pipe. Any remaining cable may remain exposed or be wrapped around nearby unheated pipe sections for additional freeze protection.
- Do not force or sharply bend the cable.

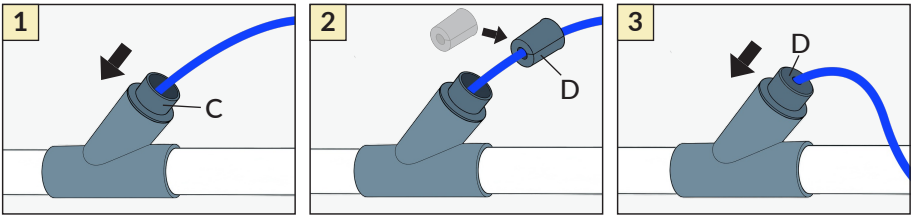




Step 5: Install Sealing Grommet

1. Insert the **Rubber Gasket (C)** into the side port of the Y-Fitting.
2. Slide the **Sealing Grommet (D)** onto the cable.
3. Push the sealing grommet into the rubber gasket until it is properly seated.

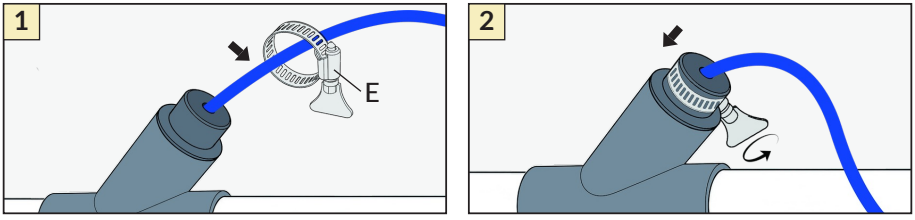
This assembly forms the primary seal around the cable.



Step 6: Tighten the Lock Nut

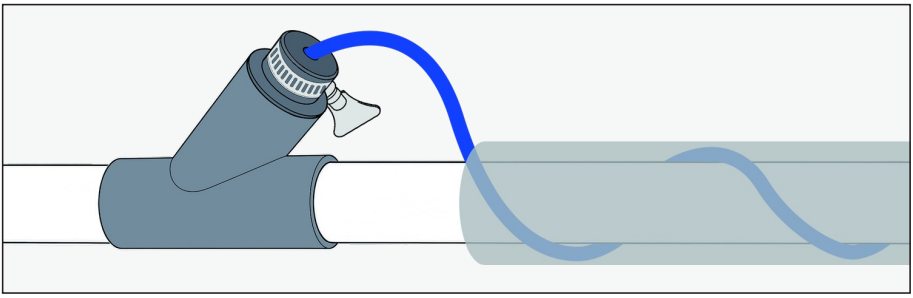
1. Slide the **Lock Nut (E)** over the rubber gasket.
2. Tighten the lock nut evenly until the rubber gasket is compressed and a watertight seal is formed.

Note: Do not overtighten.



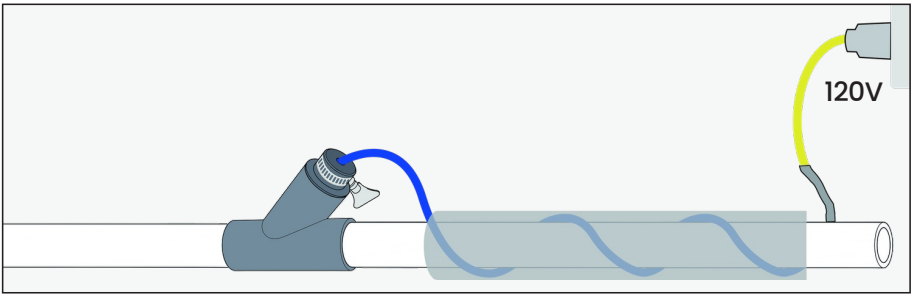
Step 7: Cable Routing

1. Remaining exposed cable may remain exposed or be wrapped around adjacent unheated pipe sections for additional freeze protection. Wrapping is optional.
2. For best results, wrap the protected pipe section with suitable **pipe insulation** after installation.



Step 8: Cure & Leak-Test

1. Let solvent-cement joints cure fully per the cement instructions.
2. With the cable unplugged, run water through the drain. Check all joints and seals.
3. Correct any leaks and repeat the test before connecting power.



Step 9: Power On

1. After a leak-free test, plug into a grounded 120 V AC outlet. Use an outdoor weatherproof cover where required.
2. Extension cords must be grounded, 16 AWG or heavier, and meet local codes.

KEY GUIDELINES & CABLE NOTES

Critical Installation Rules

- **Partial insertion allowed:** The heating cable may remain partially outside the pipe for auxiliary freeze protection.

Critical Installation Rules

- **Exposed Cable Use:** Any cable remaining outside the pipe may remain exposed or be wrapped around nearby unheated pipe sections for additional freeze protection.
- **Coiling & Overlapping:** Allowed due to the self-regulating design under normal use.
- **Full coverage:** Install cable to cover **all freeze-prone segments**; partial coverage may still cause ice blockages.
- **Sharp edge protection:** Use sleeves where cable contacts sharp edges.
- **Drainage Slope:** Maintain a minimum slope of 1/4" per foot for proper flow.
- **Cut Length:** Cut conservatively. Removing too much pipe may reduce insertion depth and cause weak joints or leaks.

Operational Notes

- Designed for **freeze prevention**, not for thawing frozen pipes.
- Install before freezing temperatures occur.
- Multiple Y-Fitting may be used for long runs.
- The self-regulating heating cable automatically adjusts its heat output based on temperature and can operate without an external thermostat.
- The cable does not completely shut off, but reduces its output as temperatures increase, allowing safe continuous operation during winter conditions.
- An external pipe heating thermostat controller may be used to further optimize energy efficiency and is recommended in certain applications.

WARNINGS & SAFETY INSTRUCTIONS

Electrical Safety

- DANGER: SHOCK HAZARD – Disconnect power before installation/service.
- Use only grounded 120 V AC outlets.
- Outdoor installations require weatherproof enclosures.
- Do not use damaged cable; replace immediately.
- Extension cords are permitted only if they meet strict specifications: 16 AWG or heavier gauge, grounded, and compliant with applicable electrical codes. Do not use lightweight, ungrounded, or damaged extension cords or power strips.

Installation Safety

- Wear eye protection and cut-resistant gloves when cutting pipe.
- Use primer and solvent cement in well-ventilated areas. Avoid fumes and skin contact.
- Protect the cable from sharp edges and abrasion.

Operational Safety

- For **non-pressurized gravity drainage only.**
- Do not expose or operate the cable outside its rated temperature limits.
- Do not submerge electrical connections in water.
- Keep cable away from combustible materials.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No heat	Unplugged / tripped breaker / damaged cable	Check power, outlet, and cable condition
Uneven heating	Poor cable routing or insufficient pipe coverage	Re-route cable and verify the frozen sections are properly covered
Leaks at Y-Fitting	Loose plug / bad cement / crooked cut	Reseat plug; re-cement; recut pipe
Drain still blocks / freezes	Insufficient coverage / wrong slope	Extend cable; adjust pipe slope
GFCI trips	Moisture in connection / damaged jacket	Dry connections; replace cable
Rubber seal fails	Worn plug / misalignment	Replace plug; verify proper seating

MAINTENANCE & STORAGE

Routine Maintenance (Cold Season)

- Weekly: Visually inspect seals, cable routing, and leaks.
- Monthly: Clear debris; check drainage and electrical connections.
- Seasonal: Test before winter; inspect for damage after winter.

Cleaning

- Clean fittings with mild soap and water; no abrasives or solvents.
- Wipe cable with dry cloth; do not submerge in water.
- Replace rubber plugs if cracked or deformed.

Off-Season Storage

- Disconnect power; clean and dry all parts.
- Store in cool, dry area; avoid direct sunlight.
- Loop cable loosely; do not tightly coil.

Disposal

- Dispose of electrical components per local e-waste regulations.
- Recycle PVC/ABS parts through plumbing recycling programs.

WARRANTY & CUSTOMER SUPPORT

Warranty Policy

This product is warranted against defects in materials and workmanship under normal use and service for a period of **ONE (1) YEAR** from the date of purchase.

Covered Items:

- Manufacturing defects
- Heating cable malfunction
- Premature failure under normal operating conditions
- Y-Fitting and rubber plug defects

Not Covered:

- Damage from improper installation
- Normal wear and tear
- Misuse, abuse, or unauthorized modification
- Use in non-specified applications
- Damage from water ingress caused by improper installation, damaged seals, weather exposure beyond product rating, or accidents

Customer Support & Claim Procedure

For warranty service, technical assistance, or product inquiries:

Email: yelodeer@yelodeer.com Website: www.yelodeer.com

To submit a warranty claim:

1. Send an email with detailed issue description and photos.
2. Provide order ID or screenshot of purchase (to help us verify your order).
3. Include product model, installation location, and purchase date.

Additional resources: installation videos, product registration, FAQ, and distributor information are available online.

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