

Paladin[®]/EXT

Multi-Use Freeze Protection for Pipes, Tanks and Vessels of All Types and Sizes.

Paladin/EXT Series is a job-ready freeze protection kit for use on both metal and plastic pipes. Paladin is acceptable for direct earth burial and wet location, making it suitable to be installed inside non-pressurized, non-potable pipes such as drainage pipes.



Paladin



SCAN ME

EXT-R Series



SCAN ME

EXT-T Series



SCAN ME

See more product information, videos, photos, technical documents, and more



Paladin/EXT Series

Features & Benefits

- Suitable for direct earth burial and wet location
- Factory finished to length making installation simple, fast and cost effective
- Available in a plug-in GFCI model or hard wire cord-set model depending on application
- Customizable for various application requirements
- Available in common lengths and long lengths
- Suitable for multiple pipe sizes both metal and plastic
- Lengths of EXT in 40 feet and greater are supplied on a dispensing reel for ease of installation
- Will never melt or overheat, even if pipe is dry
- Can be overlapped without concern of overheating
- Can be used to protect, pipes, tanks, vessels, soil heating and more
- Can be installed inside non-pressurized drain pipes
- Approved for applications with aggressive fluids or materials (EXT-T)
- Single trace installation is suitable for most applications saving product length

For more Features and Benefits common to all Heat-Line systems, refer to page 6.



Specifications

- cCSAus approved (Canada and USA) LR85446
- Certified Usage W and S (Paladin only) Canada
- Installation Type A USA
- Approved for direct burial and wet location
- Self-regulating/conductive polymer heating cable
- Thermo Plastic Elastomer (TPE) jacket (Paladin and EXT-R)
- Fluoropolymer outer jacket (EXT-T)
- Standard wattage 5 W/ft @ 50°F (16 W/m @ 10°C)
- Special wattages available
- Available in 120V and 240V
- Max lengths 120V - 230 ft, 240V - 550 ft
- Available with either GFCI plug or CS hard wire connection
- Standard warranty of 5 yrs with optional 10 yrs
- Suitable for exposure temperatures up to 150°F (65°C)

Applications

- Existing water supply lines subject to freezing
- Small diameter water supply lines
- Large diameter pipes
- Sewage pipes, drains and culverts
- All metal pipes, all plastic pipes
- Metal tanks, Non-metal tanks
- Lake homes and cottages, farms, agriculture
- Commercial, industrial, construction sites
- Camps, mining
- Soil heating
- Food processing plants (EXT-T)
- Parking garages





Paladin vs EXT-R vs EXT-T

There is no mechanical and or physical difference between the Paladin and EXT-R series product groups. However, the Paladin system carries an additional certification designation which makes it certified for use in roof and gutter applications. These designations restrict the maximum product length allowed so to allow for longer pipe heat tracing systems we drop the Roof and Gutter designations and use the EXT-R product name.

The EXT-T heating cable is constructed with a fluoropolymer outer jacket resistant to aggressive fluids and or materials, such as animal urine, manure, gasolines and oils. The fluoropolymer jacket also has potability ratings so is suitable for certain food processing plant applications. In comparison, the EXT-R and Paladin heating cables are constructed with an elastomeric outer jacket design for ordinary installations. Apart from the cable jacket material, another difference is the standard wattage available.

Practical and Versatile External Systems

Paladin/EXT is designed to be applied to the outside of the pipe, making it suitable for both small and large pipe diameters. Traditional style heat tapes must be pitched or spiraled around the pipes in order to apply an adequate amount of heat, making them very high in energy consumption. In most applications, the Paladin/EXT systems are installed in a single run, reducing the overall length of product by as much as 60 percent. For large pipe diameters or where more heat is required, a dual (double) trace system is adequate, which still saves on product length.

CSA Approved

Paladin/EXT carries CSA approvals for wet location and direct earth burial which is not found on any other external heating cable on the market.

The wet location approval allows the heating cable to be installed inside non-pressurized, non-potable, non-metallic or metallic pipes such as drains and culverts, making installation easy for pre-buried pipes. Direct earth burial allows installation on the outside of water supply lines and septic pipes before they are buried.

Versatile Applications

The Paladin/EXT systems are so versatile that they are used in a variety of applications, including but not limited to water supply lines such as lake/river to house, well to house, building to building, farm water or fluid supply, RV and marine water supply as well as under structure copper pipes, any exposed pipes, culverts, drains, tanks and even in some soil heating applications.

Safe on All Pipe Materials

Paladin/EXT is safe to use on all pipe materials, including plastic and metals, even if there is no water in the pipe. Insulation and a thermostat can be added to the system to further optimize energy efficiency.

Factory Finished

Paladin/EXT is factory finished to length making installation simple, fast and cost effective. The need for an electrician to provide on-site power and complex terminations is eliminated.

Paladin | Product Code Guide

Example: **PLDI – 100 – GFC**

Product

PLDI 120 V Paladin
PLDI2 240 V Paladin

Cord-Set Type

GFC Ground fault protected
5-15 P 120 V / 6-15 P 240 V
CS Cord connected (no GFCI)

Length of System

120 V max length 120 ft
240 V max length 240 ft

NOTE: Nominal power output of Paladin system is 5 W/ft @ 50°F (16 W/m @ 10°C). Only available in Modified Polyolefin outer heating cable jacket.

EXT Series | Product Code Guide

Example: **EXT120 – 5 – R – 100 – GFC**

Product

EXT External Heating Cable

Voltage

120 120 V EXT
240 240 V EXT

Nominal Power Output

3 3 W/ft @ 50°F (10 W/m @ 10°C)
5 5 W/ft @ 50°F (16 W/m @ 10°C)
8 8 W/ft @ 50°F (26 W/m @ 10°C)

Heater Type

R Modified Polyolefin heater jacket
T Fluoropolymer heater jacket

Cord-Set Type

GFC Ground fault protected
5-15 P 120 V / 6-15 P 240 V
CS Cord connected (no GFCI)

Length of System

	GFC Ground Fault Protected	CS Cord Connected (no GFCI)
	Max length	Max length
3 W/ft 120 V	270 ft	300 ft
5 W/ft 120 V	230 ft	270 ft
8 W/ft 120 V	150 ft	200 ft
3 W/ft 240 V	550 ft	660 ft
5 W/ft 240 V	460 ft	540 ft
8 W/ft 240 V	300 ft	400 ft

NOTE: Installers must provide 20 Amp circuits for CS circuit lengths greater than the maximum length set for GFC.

Paladin/EXT Series | Accessories

HLJ-STAT	120V plug-in thermostat (GFC)	INSUL-2.00	Insulation sleeve for 2 inch ID pipe (2 5/8 inch ID, 6 ft long)
HLA-120	120V plug-in thermostat (GFC)	INSUL-3.00	Insulation sleeve for 3 inch ID pipe (3 1/2 inch ID, 6 ft long)
GFA-STAT	120/240V hard wire thermostat GFEP (CS)	INSUL-4.00	Insulation sleeve for 4 inch ID pipe (4 1/2 inch ID, 6 ft long)
TIMER-120P	120V plug-in timer (GFC)	HLP-TAPE	Tape for insulation sleeve butt joints (100 ft)
TIMER-240P	240V plug-in timer (GFC)	INSUL-FOIL	Aluminum bubble foil insulation (16 in wide, sold by the foot)
TIMER-CS	120/240V hard wire timer (CS)	INSUL-TAPE	All weather aluminum foil tape (150 ft)
MA-10	120/240V GFCI/ELCI (CS)	PLD-CG	Cable guards/protectors (pkg of 4, 6 in each)
INSUL-1.00	Insulation sleeve for 1 inch ID pipe (1 5/8 inch ID, 6 ft long)	WARRANTY	Extended 10 year limited warranty
INSUL-1.25	Insulation sleeve for 1 1/4 inch ID pipe (1 7/8 inch ID, 6 ft long)		