

## Retro-DWS® AT A GLANCE

- cCSAus certified for septic applications
- Heat-Line self-regulating heating cable technology
- Five year warranty with optional 10 year extended
- Can be fully insulated to decrease energy costs
- Thermostats and other control devices optional
- Will never melt or burn the pipe, even if pipe is dry
- Can be easily installed inside most existing pipes, tanks and vessels without their removal
- Fast Installation - Retro-DWS comes ready to use
- Can be pushed in up to 150 ft (46m) and sometimes greater
- Completely serviceable, remains in place without downward end being secured
- Fernco plumbing fittings supplied to ensure connections are simple, secure and leak proof

## SPECIAL REQUIREMENTS

Since 1988, Heat-Line has been specializing in freeze protection of all types. If you have a special application of any kind, give us a call. Special system designs are common to us. We manufacture many other innovative products not mentioned in this brochure.



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HLDWS-1123-B

## SPECIFICATIONS

### Approvals

cCSAus approved (Canada and USA)  
Usage Type W Canada, Installation Type D USA  
Internal waste (Grey and Black) water certified

### Plumbing Specifications

Tubular heater constructed of ½ inch ID chemical resistant HDPE

Minimum pipe ID required for installation is 3 inches

Supplied with female Fernco® flexible couples to adapt to 4 inch ABS pipe and spigots (3 inch kit optional add on)

Supplied with Nibco® 4 inch threaded male adapters SPIG x MIPT for connection to 4 inch ABS clean-outs (3 inch kit optional add on)

### Electrical Specifications

Self-regulating/conductive polymer tubular heater

Standard systems 5 W/ft @ 50°F (16 W/m @ 10°C), custom systems available by special request in 8 W/ft @ 50°F (26 W/m @ 10°C)

#### 120 Volt models

5 W/ft at 50°F (16 W/m @ 10°C), maximum length 230 ft (70m)

8 W/ft at 50°F (26 W/m @ 10°C), maximum length 150 ft (46m)

GFC model - 4 ft (1.2 m) power supply lead with 27/30 milliamp GFCI plug-in device

CS model - 6 ft (1.8 m), 14 or 12 AWG SJEOOW supply cord for direct hard wire connection

#### 240 Volt models

5 W/ft at 50°F (16 W/m @ 10°C), maximum length 540 ft (165m)

8 W/ft at 50°F (26 W/m @ 10°C), maximum length 400 ft (122m)

GFC models - 6 ft (1.8 m) power supply lead with 27/30 milliamp GFCI plug-in device

CS models - 6 ft (1.8 m), 14 or 12 AWG SJEOOW supply cord for direct hard wire connection



## THERMOSTATS & TIMERS

Retro-DWS eliminates the necessity for control devices like thermostats and timers, transforming them from mandatory components to optional accessories that enhance energy efficiency.

It is important to understand that while self-regulating technology is very efficient; the heating cable can never completely turn off and as a result is always a minimal consumer of energy when powered (turned on or plugged in directly). The addition of a thermostat or timer will duty-cycle the heating cable on / off thus decreasing the energy consumed further.



Depending on the application, combining insulation and a thermostatic control can increase energy savings by as much as 80%.

Other control options such as simple switches, computer controllers, monitoring services and automation systems can also be employed. Consult Heat-Line directly for control option questions.

## INSULATION

An important feature of Heat-Line self-regulating heating cables is their ability to be thermally insulated without the risk of overheating.

A thermally insulated pipe is not as susceptible to freezing and erratic changes in the environment's temperature.

The insulation creates greater thermal consistency throughout the pipe and increases the efficiency of the Retro-DWS system. When the warmth generated by the heating cable system is captured by insulation, the amount of energy consumed by the heating cable is vastly reduced.

It is recommended that all new or exposed pipes are insulated. Depending on the application, combining insulation and a thermostatic control can increase energy savings by as much as 80%.



## Retro-DWS®

Internal Heat Tracing System for Drain, Waste and Sewer Applications



ABOUT Retro-DWS®

Retro-DWS is a job-ready, advanced internal self-regulating tubular heating cable system that is used for efficient and reliable pipe freeze protection of non-pressurized drain, waste, and sewer pipe applications.

The Retro-DWS is manufactured using a pre-determined length of Heat-Line certified, self-regulating heating cable, factory installed inside a ½ inch HDPE tube finished with a proprietary fusion end-seal. The purpose of the HDPE tube is to provide a barrier from fluids such as grey and black water, while providing extremely efficient heat transfer. The Retro-DWS is supplied with certified plumbing fittings to interface with existing pipes using an existing or installed clean-out, Tee or Wye as an access point.

APPLICATIONS

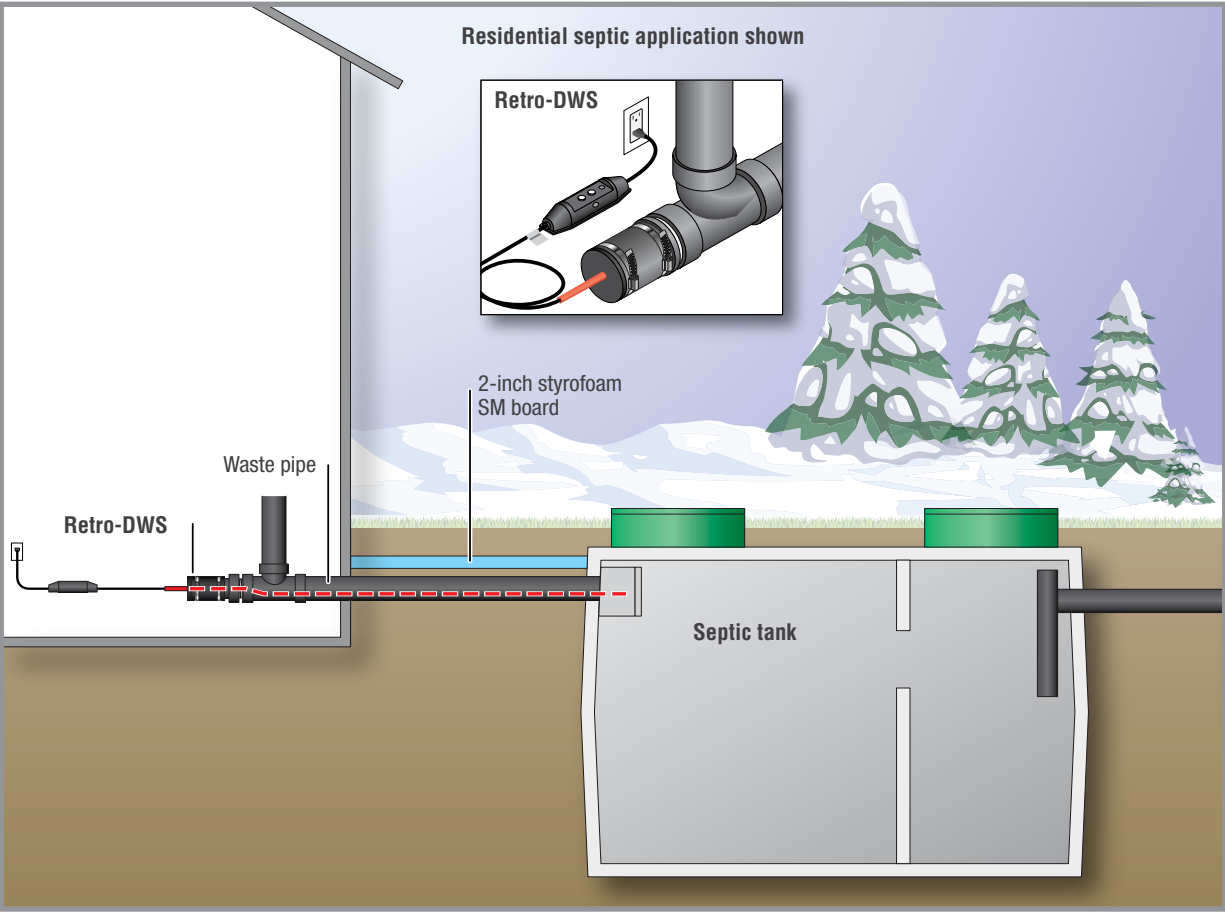
The Retro-DWS tubular heater is a safe and reliable solution for non-pressurized drains consisting of metallic or non-metallic materials.

Applications include but not limited to:

- Existing sewage, septic and effluent pipes
- Existing storm drains and culverts
- Existing septic and holding tanks
- Existing leech fields and septic beds

For pressurized pipe systems such as sewage forced mains refer to the Heat-Line Retro-FM.

For new or exposed pipes refer to the Heat-Line Paladin/EXT systems.



INSTALLATION

The Retro-DWS is supplied job-ready with certified plumbing fittings to interface with 4 inch ABS pipes (3 inch kit optional add on) using an existing or installed clean-out, Tee or Wye as an access point.

The versatile interface process of the Retro-DWS makes the system suitable for installation in pipe diameters from 3 inches to greater than 8 inches. The Retro-DWS can be easily adapted to fit larger pipe diameters by using readily available, industry standard components.

The Retro-DWS system will easily push inside most pipes for distances up to 150 feet (46 meters). For long distances Retro-DWS can be drawn in with an electrical or plumbers fish tape or rope.

In applications where the pipe may be dry for short or extended periods of time, the Retro-DWS presents no danger of overheating or melting the pipe, making it suitable for all metal and non-metal drain lines that may not always contain liquids.

Retro-DWS can be used as a system to prevent freezing or as a precautionary system to use only if a freeze-up occurs.

IMPORTANT CONSIDERATIONS: The Retro-DWS tubular heater may in rare circumstances obstruct certain materials. As such the Retro-DWS is designed to be serviced if there is a concern of impediments.

ORDERING GUIDE

Example: **DWS-5-100-GFC**

Product	
DWS	120 V Retro-DWS
DWS2	240 V Retro-DWS

Nominal Power Output	
5 W/ft	120 V @ 50°F (16 W/m @ 10°C)
8 W/ft	120 V @ 50°F (26 W/m @ 10°C)

Length of System	
Ground fault protected	Cord Connected
Max length	Max length
5 W/ft 120 V	230 ft
8 W/ft 120 V	150 ft
5 W/ft 240 V	460 ft
8 W/ft 240 V	300 ft

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

NOTE: Installers must provide 20 Amp circuits for CS circuit lengths greater than 460 ft for 5 W/ft and 300 ft for 8 W/ft systems.



SELF-REGULATING TECHNOLOGY

Retro-DWS employs the unique and advanced performance of self-regulating heating cable technology. Self-regulation allows the heating cable to effectively increase heat and energy output to sections along its length which are cold and simultaneously reduce heat and energy output to sections which are warm.

Retro-DWS gives you the peace of mind of reliable freeze protection without the risk of burning out or over heating. Retro-DWS has become an essential product for home owners, engineers and building maintenance professionals to provide safe and reliable freeze protection in specialized applications.