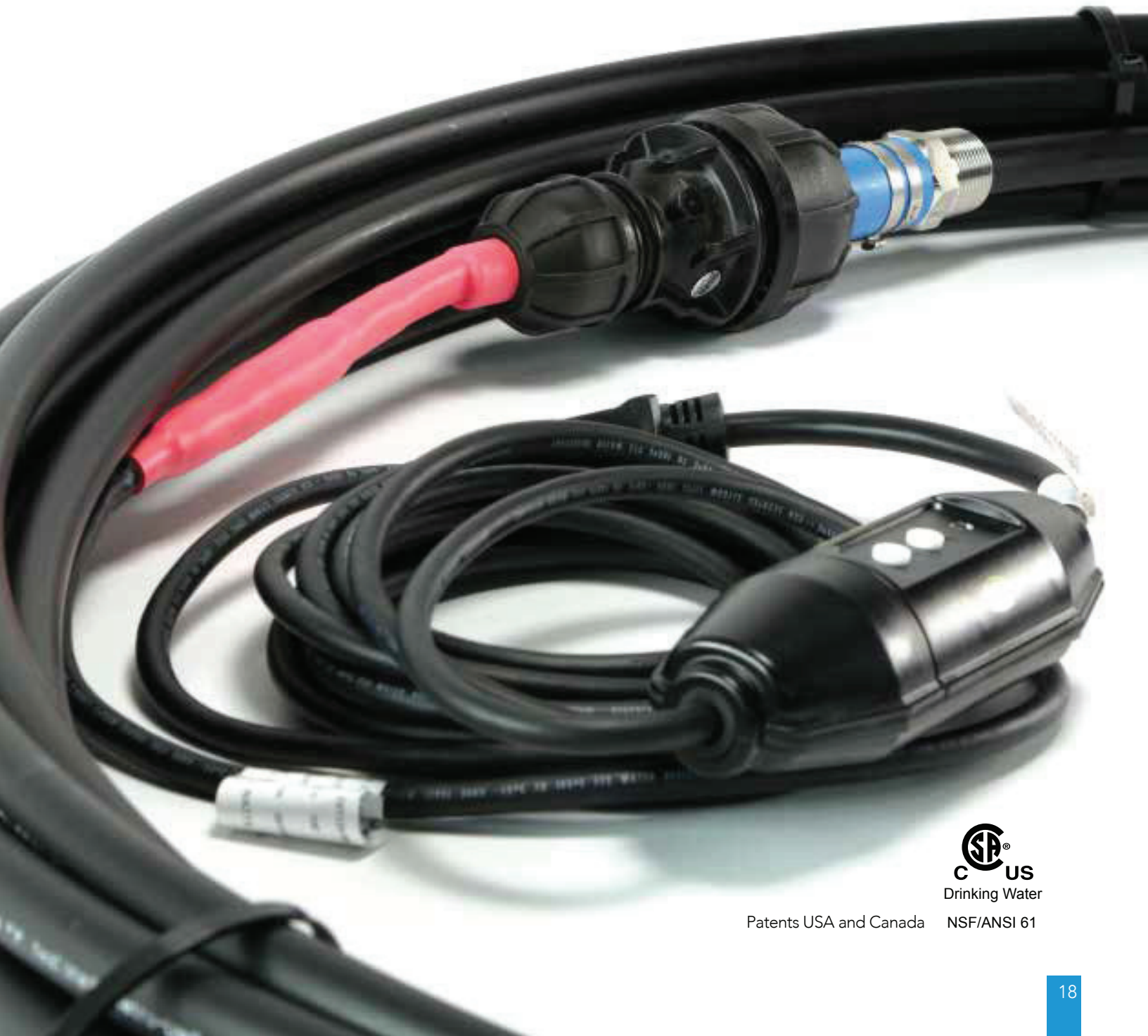
Retro-FM™

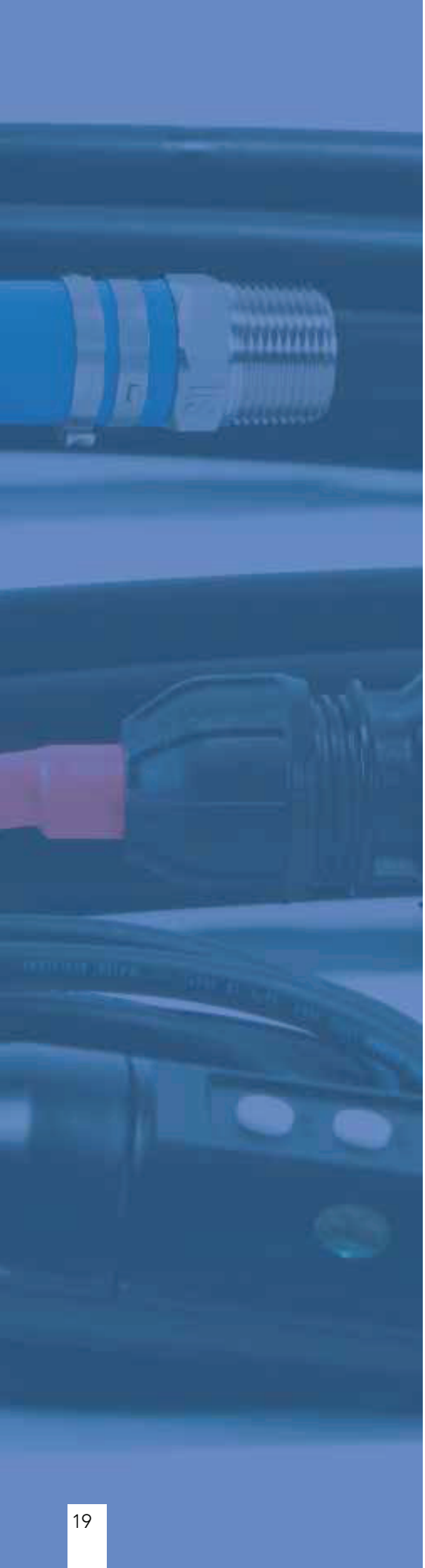
Pressurized, Sewage, Force Main and Large Diameter Potable Pipe Freeze Protection System.

Retro-FM (Force Main) self-regulating heating cable systems are supplied job-ready to internally heat trace pressurized sewage force main applications. Retro-FM can be easily adapted to a variety of pipes and can also be interfaced to larger diameter potable pipes by using readily available bushings and fittings.



C US Drinking Water

Patents USA and Canada NSF/ANSI 61



SELF-REGULATING

Retro-FM is a tubular self-regulating heating system designed for use in pressurized sewage and greywater force mains and large diameter pressurized potable water pipes.

CSA/NSF APPROVED

Retro-FM is cCSAus NSF/ANSI 61 Drinking Water approved, usage P and X (4A and 4B). The core tube is constructed of HDPE (high density polyethylene) and will push inside most pipes for long distances. It can also be drawn in with a fish tape or rope. Retro-FM utilizes a conductive polymer tubular heater technology, which provides a barrier from fluids while providing extremely efficient freeze protection.

PREVENTION OR PRECAUTION

Retro-FM can be used as a system to prevent freezing or as a precautionary system. If the system freezes, Retro-FM can be energized to begin the thawing process.

NO NEED TO EXCAVATE

Retro-FM provides freeze protection for existing problematic pipes without the need to excavate. Insulation and thermostatic controls can be added to optimize energy efficiency as required.

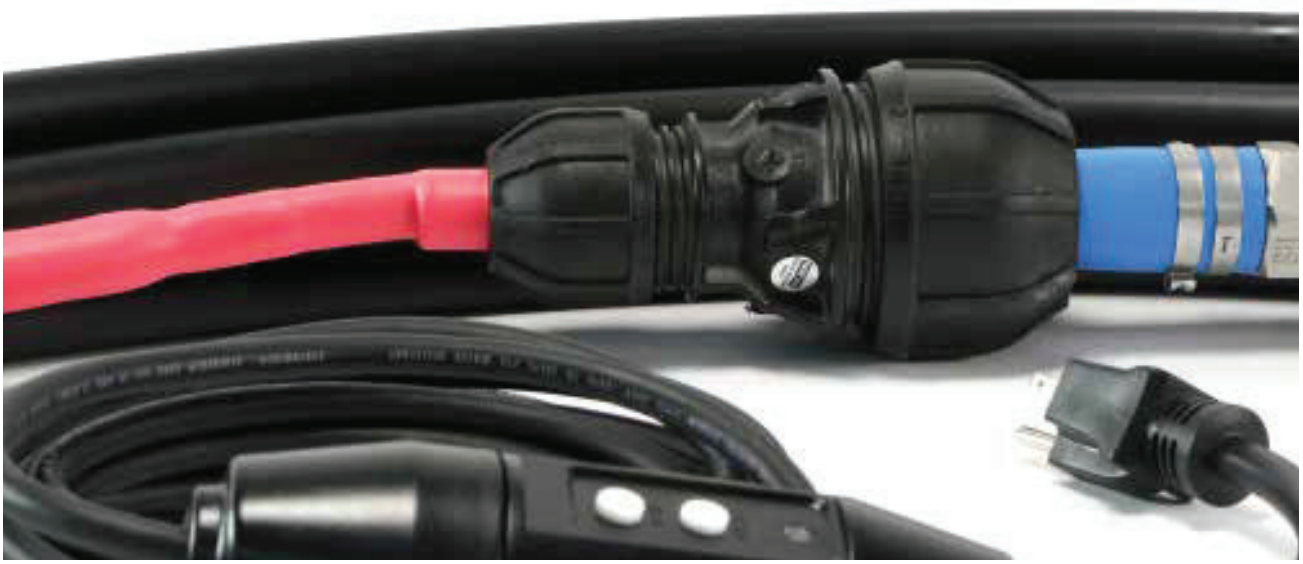
CUSTOM LENGTHS

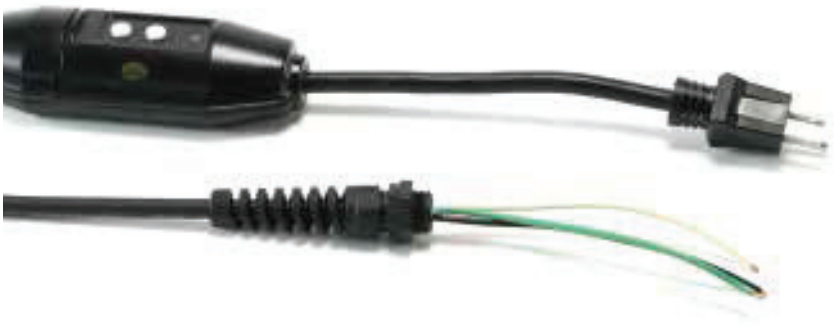
Retro-FM employs Heat-Line's self-regulating technology applied within a factory assembled, fusion sealed HDPE tube. The systems are custom manufactured to specified lengths and come with a 20 foot SJEOOW hard usage cord-set, with or without integral ground fault circuit protection.

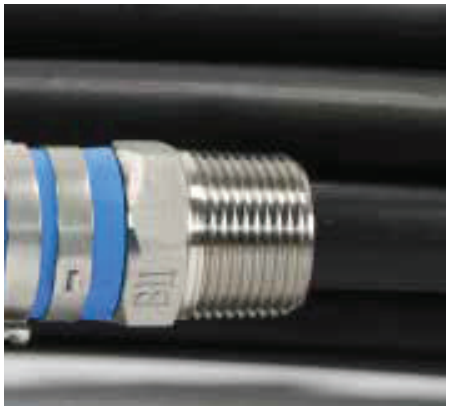
COMPATABLE FOR ALL PIPES

The system is compatible for use with all pipe types, including metal and non-metal. Even if the pipe is dry, the tubular heater presents no danger of overheating even when thermally insulated. This is very important for use in pipes that drain back or are periodically dry.

Retro-FM™







PROTECTS POTABLE WATER PIPES

Retro-FM is designed to protect many large pressurized pipe systems that contain fluids that are compatible to be in contact with polyethylene, including potable water pipes. Retro-FM (Force Main) self-regulating heating cable systems are supplied job-ready to internally heat trace pressurized sewage force main applications. Retro-FM can be easily adapted to a variety of pipes and can also be interfaced to larger diameter potable pipes by using readily available bushings and fittings.

JOB READY TO QUICKLY INTERFACE FITTINGS

Retro-FM is supplied job-ready with a 1 inch stainless steel MIP staged fitting to quickly interface into force main tee or wye fittings. The product can be used in a variety of applications.

Retro-FM ™ Features / Benefits / Differentiators / Applications

Features

- Designed for installation into pressure vessels up to 230 PSI
- Thermostats and other control devices are optional
- Will not melt or overheat
- Can be fully insulated
- Extremely energy efficient
- Available in 120 volt or 240 volt systems
- 5 year limited warranty/ 10 year optional
- Constructed of NSF certified potable polyethelene pipe
- Available with either GFCI plug or CS hard wire connection
- Self-regulating, high performance tubular heater
- Available in common lengths
- Made of chemical resistant HDPE
- Suitable for installation in pressurized metallic and non-metallic pipes, tanks and vessels
- Excellent for force mains with certified fittings

Benefits

- Fast installation
- Proven performance in extreme cold climates
- Each finished system is tested prior to shipment
- Single trade installation
- Manufactured to finished lengths for individual service requirements
- Insulate to maximize energy efficiency
- Thermostats not required for applications where they are not beneficial
- Interfaces with standard fittings known in the trade
- Limits or eliminates trenching and/ or blasting
- Inherent mechanical protection
- Application flexibility
- Can be installed into existing pipes, tanks and vessels without excavation
- Suitable for use with metal and plastic pipes
- Unlimited control options
- Multiple applications capability

Differentiators

- Manufactured in North America
- Heating cable set cCSAus approved for installation throughout the USA and Canada
- Clear, concise installation and support documentation
- Will not melt or overheat pipe
- Available in long lengths
- Electrically efficient heating cable technology
- Customizable for various pipe types and sizes
- Completely serviceable
- The only tubular heater for in-pipe pressurized applications
- Extremely high quality
- Excellent warranty

Applications

- Rural homes, cottages, farms
- Commercial, industrial
- Municipal
- Storm drains under parking lots
- Storm sewers
- Sewers
- Sewage force mains
- Camps, mining
- Wherever blasting would be required to reach frost line

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Retro-FM ™ | Product Code

Example: **FM – 5 – 100 – GFC**

Product

FM	120 volt Retro-FM
FM2	240 volt Retro-FM

Wattage

5	5 Watt, self regulating heater

Cord-Set Type

GFC	Ground fault protected
CS	Cord connected (No GFCI)

Length of System

10 to 230 feet	120 volt systems
10 to 300 feet*	240 volt systems

*Longer system lengths available by special request

Retro-FM ™ Specifications

Approvals	cCSAus Drinking Water NSF/ANSI 61 approved (Canada and USA)
Voltage	120 volt 240 volt
Output	Self-regulating conductive polymer 5 watt/ft @ 50°F
Service tube	PE 4710 Polyethylene Service Tube – NSF and CSA approved
Maximum circuit length	300 ft (longer custom lengths available)
Electrical connection options	Plug in GFCI model Cord-set to be hard wired to a ground fault protected circuit
Available options	Can be used with thermostats, timers and other control options
Pressure rating	225 PSI rated