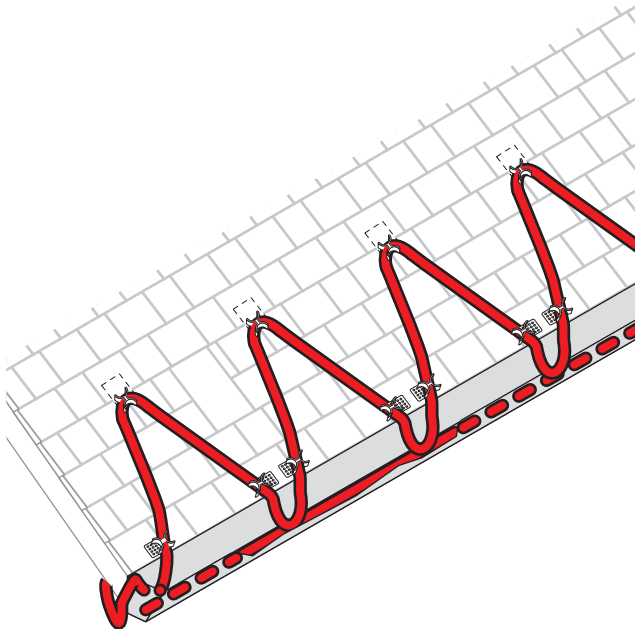
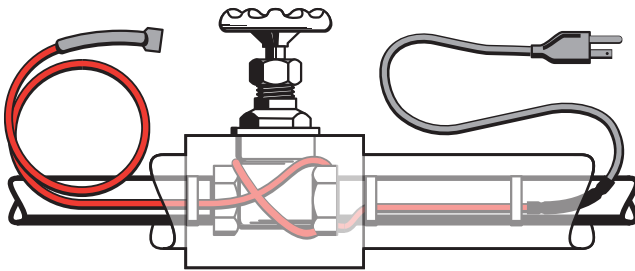


# Raychem FROSTGUARD

## PREASSEMBLED HEATING CABLE



### PRODUCT OVERVIEW

Raychem FrostGuard preassembled self-regulating heating cables are designed for residential and commercial metal and plastic pipe freeze protection and roof and gutter de-icing applications. 120 V FrostGuard cables are available in 6, 12, 18, 24, 36, 50, 75 and 100 foot lengths, and each comes assembled with a 6-ft power cord and 3-prong, grounded, lighted plug to show the system is on. 120 V FrostGuard cables are ideal for smaller jobs such as roof and gutter de-icing on porches and overhangs, as well as for pipe freeze protection on metal or plastic pipes up to 2-½ inches in diameter.

240 V FrostGuard cables are available in 6, 12, 18, and 24 foot lengths and each come assembled with a 6-ft power cord for terminating in a junction box. Due to their short lengths, 240 V FrostGuard cables are designed only for pipe freeze protection applications on pipes up to 2-½ inches in diameter.

### FROSTGUARD PREASSEMBLED HEATING CABLE SPECIFICATIONS

CATALOG NUMBER	120 V with 6-ft cold lead & lighted plug	208-240 V with 6-ft cold lead
	FG1-6P	FG2-6L
	FG1-12P	FG2-12L
	FG1-18P	FG2-18L
	FG1-24P	FG2-24L
	FG1-36P	
	FG1-50P	
	FG1-75P	
	FG1-100P	

# FROSTGUARD

## FROSTGUARD PREASSEMBLED HEATING CABLE SPECIFICATIONS

APPLICATION	Pipe freeze protection and roof and gutter de-icing	Pipe freeze protection
Voltage	<b>120 V</b>	<b>208-240 V</b>
Nominal power output on pipes at 40°F (5°C) (W/ft)	6	6
Nominal power output in ice or snow at 32°F (W/ft)	8	N/A
Maximum cable width (inch/mm)	0.45 (11.4)	0.45 (11.4)
Maximum cable thickness (inch/mm)	0.24 (6.1)	0.24 (6.1)
Cold lead length (ft/m)	6 (1.83)	6 (1.83)
Maximum exposure temperature	150°F (65°C)	150°F (65°C)
Minimum installation temperature	5°F (-15°C)	5°F (-15°C)
Minimum bend radius (inch/mm)	5/8 (16)	5/8 (16)

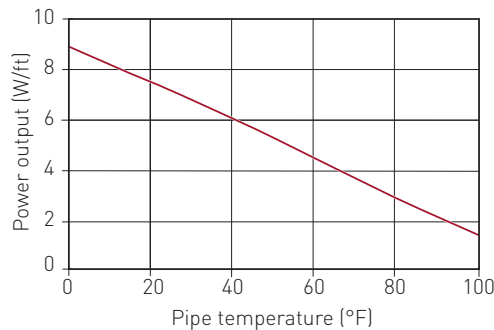
## APPROVALS



## GROUND-FAULT PROTECTION

To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of Pentair Thermal Building Solutions, agency certifications, and national electrical codes, 30-mA equipment or 5-mA personnel ground-fault protection must be used on each FrostGuard heating cable branch circuit. Arcing may not be stopped by conventional circuit protection.

## NOMINAL POWER TEMPERATURE CURVE FOR PIPES



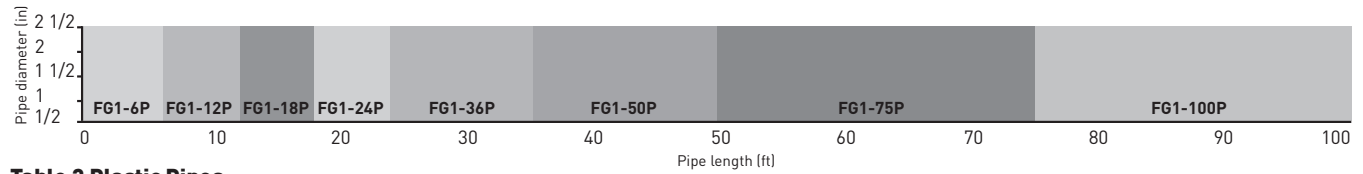
**HEATING CABLE SELECTION FOR PIPE FREEZE PROTECTION**

**Pipe freeze protection**

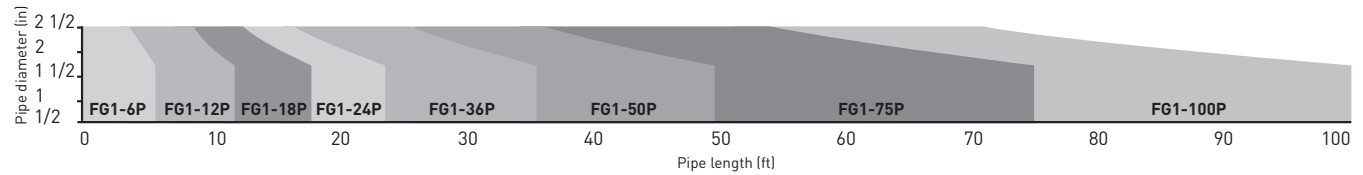
Use the tables to below to select the correct heating cable length.

**FrostGuard 120 V (FG1) Heating Cable Selection**

**Table 1 Metal Pipes**



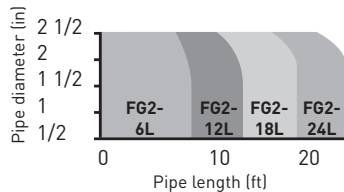
**Table 2 Plastic Pipes**



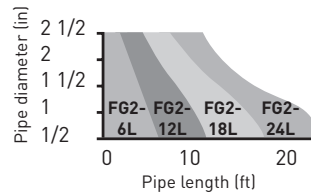
Add 1 foot to your pipe length for each valve or spigot on your pipe system. If cable selected is longer than the pipe, spiral it evenly along the entire pipe.

**FrostGuard 240 V (FG2) Heating Cable Selection**

**Table 1 Metal Pipes**



**Table 2 Plastic Pipes**



Add 1 foot to your pipe length for each valve or spigot on your pipe system. If cable selected is longer than the pipe, spiral it evenly along the entire pipe.

**HEATING CABLE SELECTION FOR ROOF AND GUTTER DE-ICING (120 V ONLY)**

Find the number of feet of heating cable needed per foot of roof edge in table to the right. Then, calculate the amount of total heating cable length you need using the following formula:

Length = **A + B + C + D**

- A** Roof edge length (ft) x Length of cable per foot of roof edge (ft)
- B** Roof edge (ft) x 0.5\*
- C** Total gutter length (ft)
- D** Total downspout length (ft) + 1 (ft) [double if looping]

= Total heating cable length (ft)

\*Roof extension: This length allows the heating cable to extend into the gutter to provide a continuous drain path, or where no gutters are present, extends beyond the roof edge to form a drip loop.

**Length of Cable Per Foot of Roof Edge (ft)**

Overhang (in)	Standard Roof	Standing Seam Metal Roof	
		18 inch Seam	24 inch Seam
None*	2	2.5	2
12 in	2.8	2.8	2.4
24 in	3.8	3.6	2.9
36 in	4.8	4.3	3.6

\* Gutter required

**Note:** Pentair Thermal Building Solutions recommends a gutter and downspouts to provide a continuous path for melted water.

- If downspout is in the middle of the run, loop the FrostGuard down and back up. Double the length of the downspout for determining the length of FrostGuard to install.
- For valleys, run the heating cable two thirds of the way up and down the valley.
- For gutters 5-6 inches wide, use 2 runs of heating cable.
- For gutters wider than 6 inches contact Pentair Thermal Building Solutions, (800) 545-6258.



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