

ASK THE INSPECTOR COLUMN FOR JANUARY 13, 2016  
HEADLINE: ARE HEAT CABLES THE ANSWER?

We are just starting to see some form of winter as we know it; seems the El-Niño effect is having its effect for sure. When we get this kind of milder winter, we see a lot more freeze-thaw cycles and the accompanying ice buildup or ice damming, as it's called on roofs. As it happens, I was talking with some professionals in the roofing business just before Christmas. Nearly all were quick to point out that heat cables are not designed to eliminate the ice dam issue. Rather, they are intended to provide a channel for the water that builds up behind the ice dam. It is this pocket of water that leaks under the shingles, causing damage to the inside of the house.

One roofing professional noted that, "We see roofs where the owner has failed to include the eavestrough and downspout in the heat run and have defeated the purpose of the heat cable." You must provide a channel for the water to run along the eavestrough and down the discharge. From experience with these cables, I know that the heat loop should extend out past the end of the downspout and, if you have a long discharge on the ground, maybe take this off for the winter and put a shorter one on until the spring thaw. Some of the newer heat cables have much better roof clips than the older models. The biggest issue is and has always been, remembering to turn them on.

I took this up with the folks at "Easyheat" in Elmira, Ontario. Their parent company, Emerson Industrial, is one of the largest manufacturers of heat cables for roofs, water lines and walkways in North America and they have been making roof heat cables for nearly 20 years. I had a chat with one of their tech folks and it was very informative. When asked about the operation of heat cables, it was mentioned that they have what is known as the RS-2 Automatic Roof De-Icing Cable Roof Control. I was not aware such a control was available for the household market. I did know that there are commercial controls and sensors, but these controls can run into the thousands of dollars.

This sensory control is designed to energize the heat cables when snow or ice is present on the roof and there is a risk of melted water refreezing at the edge of the roof. The RS-2 senses the ambient temperature and, coupled with a wire sensor that detects the presence of water, activates the unit once the outside temperature drops below 4.C and there is at least 10 inches of snow. If the sensor detects water only, it will activate the heat cable no matter what the

temperature. In case of a power failure, the RS-2 has a self-test mode built into the unit. They went on to say that, while this sensor was not a real popular seller, based on feedback, they worked very well. For \$80, given the cost of electricity, I would think every heat cable installation should have one of these units. One tip, though. They should be mounted on the underside of the soffit, out of direct sunlight, as this can affect the temperature sensor.

I also asked about the actual heat cables and the different systems. The rep commented that the two cable system and the longer, one cable system, are equally effective; the most important part was the line in the eavestrough and downspout. "Easyheat" make different lengths of heat cables, starting from 20 feet and running up to 244 feet. They advised against joining them, instead, measure and buy enough cable for a single run. Their ADKS series is designed for roof de-icing only. Rated at 5 watts per foot and supplied with a three prong grounded plug on a six foot cord, they are a pre-terminated cable. The actual kits come with roof clips and cable spacers for the size purchased. They also make a PSR line that can be used both to stop water pipes from freezing and can act as a roof heat cable. Their web site is one of the most informative I have seen for technical information; go to [www.emersonindustrial.com](http://www.emersonindustrial.com) for more information. Click on easy heat in the menu bar.

If this winter plays out as most that are mild, a run on heat cables can almost be expected. While we have not had any real cold weather as of yet, if you have had a problem in the past, you are likely going to see it to some greater degree this year. Preparation for our wild swings in winter weather is difficult, however, damage from water leaking into your attic and then into the home can be averted with some planning. Note too, that if it is a mild winter, a shortage of sidewalk salt can also be expected, so you might want to stock up.

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