Careful planning and installation will result in an effective efficient snow melt system. **(All photos courtesy of The Boiler Guys, Toronto)**

From left, Alli Khan, Alexander Genzer, and Suhaib Shaikh of The Boiler Guys take a short break on a snowmelt job site.

commercial building services, Taco Canada, Mississauga, Ont. Sensor location is critical. Contractors need to consider vehicle traffic and parking or else "you are going to have a car sitting right on top of the snowmelt sensor," explains Kevin Vieira, director of sales and marketing at HBX Control Systems, Calgary.

Freeze protection

To ensure that the pipes don't freeze, the heating fluid is a glycol mixture. "How much glycol solution is needed depends on how cold it gets outside," explains Miller. "In a place like Alberta where you get down to -40C outside, the glycol solution could be as high as 50 per cent. In other places like south-western Ontario, you may get away with 25 to 30 per cent."

The glycol should be checked on a regular basis because glycol will deteriorate over time. If the glycol goes bad, this could cause the pipes to freeze or allow microbial growth in the pipes. This is where your water is going to start getting an odour or you may see black spots in the pipes, noted Michael Breault, senior technical instructor/senior instructional designer at Watts Water Canada.

Class system

There are three different classes of snowmelt systems: levels one, two, and three. Each level determines the Btu's needed for proper system operation. For example, level one is usually a residential or warmer climate application requiring between 125 and 150 Btu's per sq. ft. per hour. Installations in the Niagara Valley in Ontario or Okanagan Valley in B.C. are typically within this level.

Level two occurs in colder climates or larger residential applications. More demanding applications will range between 160 and 190 Btu's per sq. ft. per hour. Places like Calgary and Quebec City will commonly be found within the level two range.

Level three covers the most demanding heating needs. Critical areas that must be heated at all times like emergency entrances to hospitals, fire stations and helicopter pads fall within this category. In this class, between 200 and 220 Btu's per sq. ft. per hour are required.

Be careful what you promise!

Contractors need to gauge customer

Please see 'Managing' on page 31

FLOCOR

WHENEVER PIPING IS INVOLVED

HAPPY HOLIDAYS

With over 165 years experience...

Flocor is a leading distributor of Pipe, Valves & Fittings (PVF), Waterworks & Fire Protection products in Canada.

From our Flocor Family to yours,
we wish you a safe and joyous Holiday Season.

Order online @ www.flocor.ca

Live Shopping Cart
See Price & Availability
See Order History
Save Your Searches

FLOCOR

Managing customers' snowmelt expectations

Continued from page 29

expectations. Sometimes only a flamethrower will do what they have in mind, warns Remy. "You're going to sit down and have a conversation where you ask questions and talk 20 per cent of the time and listen 80 per cent of the time." Don't assume that you know what the customer is thinking.

As well, contractors need to do the math, stresses Breault. This includes a heat loss calculation to help determine supply fluid temperature, preliminary flow and pressure loss. As noted above, there are big differences from region to region.

It shouldn't be forgotten that snowmelt system operation can be expensive. This means that contractors need to educate homeowners. Some homeowners may turn the system off and never turn it on again after the initial heating bill, warns Vieira.

"Homeowners that want snowmelt systems, want it to work and not cost them unnecessarily. Give your customers all their current options for system control and let them know how to use it. It will save you call-back time and keep them happy with their system," suggested Vince Baggetta of Next Plumbing and Hydronics Supply, Toronto.

Specifications

Snowmelt tubing sizes vary from ½ to one-inch diameter depending on the installation. Pipe size affects loop lengths. Typically, they are kept as short as possible. 3/4-inch pipe can see loop lengths around 300 ft., 5/8-inch should be between 200 and 250. "The bigger the pipe, the longer we can go with our loops," remarked Alex Genzer, co-owner of The Boiler Guys, a Toronto based contractor.

When laying down the piping it is best to lay it down alternatively hot and cold, using a double serpentine, reverse-return or double spiral model. This will evenly distribute the heat; otherwise only certain areas will melt and a "candy cane" scraping type effect can occur, said Breault.

Snowmelt systems can be installed with various slab materials including but not limited to asphalt, concrete and sand bed.

If asphalt is the material for the slab, the piping needs to be protected during paving. "Sometimes with asphalt, you have to run cold water through the system while they're paving it and that's just to keep the pipes from overheating when they put down hot asphalt," explains Genzer.

Careful temperature control will prevent this concrete slab from being damaged by heat.

Helium is often used to find leaks. The system is drained and filled with helium. "We then take a helium detector and we can pinpoint the leak within one foot because helium molecules are the smallest molecule and will go through concrete," said Genzer.

The other key factor is drainage. The snowmelt water has to go somewhere to avoid a skating rink at the end of the driveway. "You are going to have the kids all playing hockey down there," remarked Barry Cunningham, general manager at Triangle Supply, Red Deer, Alberta.

Snowmelt projects vary from simple to complex. This custom home project required snow melting on several elevations.

Set and leave

Once the system is commissioned, the last thing anyone wants is a callback. Smart controls allow contractors to receive error codes and may allow them to adjust the controls remotely.

As the technology evolves, there are more opportunities for innovation. "I think a lot of systems will get away from in-slab sensor technology and just connect your system to the internet, which will run your system based on forecast," noted Vieira. In fact, that technology is already on the market, he added.

Hydronic heating contractors have the opportunity to expand their business with snowmelt systems. At the end of the day, it can be cheaper and less hassle for many customers than paying someone to scrape off the driveway.