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Share the responsibility for system's performance

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WHEN A COMPANY designs a floorheating or snow melting system and the client calls on the coldest day of the year with 4" of snowfall per hour complaining that his room temperature doesn't go beyond 60°F with his thermometer maxed out and his driveway smothered with snow and slush, everybody on the job will be trying to get off the hook.

The installing contractor blames it on the wholesaler; the wholesaler blames it on the system supplier or component suppliers.

Ultimately, the answer is whoever designed the system and created the design documents is responsible, provided that the design parameters have been followed exactly without any deviation by the installer.

Things are, however, not always that clear cut and simple when everyone is looking for a scapegoat and the client happens to be a lawyer. There are a million pitfalls in this business. Many contractors have gotten involved in complicated installations and have walked away licking their wounds, vowing to never install floorheating or snow melting again.

My best advise to you as the contractor is not to rely on anyone else 100%. Do your own homework. Study the system manufacturer's literature and manuals and go to the installation schools offered by the manufacturers. Install a pilot installation in your own home or in a home where you can monitor the system for a full season. This will help develop your confidence in installing and selling a floorheating or snow melting system.

Doing one or two systems a year is not enough to develop the experience needed to do the job right. If you are not willing to spend the time to gain the knowledge and experience needed to install these systems, you will be better off subbing the floorheating and snow melting installation to an experienced installer, especially on commercial projects.

Have one system manufacturer supply the whole system from soup to nuts, which means manifold, tubing system, layout drawings, and controls. Years of research and testing go into system design. Trying to piece a system together on your own, no matter what your prior experiences, can lead to problems you do not need.

By working with a systems manufacturer, a partnership is formed whereby you rely on his expertise

in supplying the proper components and system design. He is assured that you will follow the plans to the letter. If you call with questions from the field, you are then both talking about the same system and components which are in the system manufacturer's area of expertise.

If you use your own plans and designs and mongrel components, you cannot expect the system manufacturer to be familiar with everything you have used in the system. Responsibility sharing might cost you a small additional premium but it is a minuscule price to pay looking at the overall cost of the installed system, and an even smaller price to pay for peace of mind.

If you have installed hydronic baseboard in the past, please do not assume that the same rules apply for floorheating and snow melting systems. The first major difference is that baseboard is usually installed as an intermittent system, whereas floorheating and snow melting systems are based on constant circulation.

If something goes wrong with a baseboard system, an easy fix can always be found: add more baseboard or increase the water temperature. With floorheating you have only one chance to do it right. It either works or it doesn't.

Your client, who just paid a premium for his system expects it to work, and you can't blame him. If it doesn't, you can't add baseboard or fan coils. Remember he's just paid \$20,000 for his system to avoid

baseboard and fan coils. There are no quick fixes.

Snow melting is the same situation. It either works or it doesn't. If it doesn't, it can't be fixed unless the whole driveway is torn up.

When a system is not designed and installed properly there is the big issue becomes consequential damages. The system might heat the premises, but if it's not laid out correctly, extremely high water temperatures may be necessary under design conditions, overheating floor areas, and damaging tiles and hardwood flooring. This happens when wall-to-wall carpeted areas demand excessive supply water temperatures and no provision in the design has been made for this.

Whose responsibility is it? Maybe it's the system designer's, who to keep costs down and be competitive he didn't design a multi-temperature distribution system. Or it could be the finish flooring supplier because he didn't recommend quarter sawn or narrow boards. Or is it the flooring installer who installed the strip oak with a water content over 8%.

No matter whose "fault" it is, the first person the others subs and suppliers are going to point at is the heating contractor.

It therefore is up to you, knowing in advance all the work that goes on after your job is completed, to make sure that all the safeguards are in place. When the others ask the questions such as where was the high limit safety control to protect the floorboards from curling and cupping, you've got to be able to point to it!

My recommendations to you as the system installer are:

- Do not get into a "low price" bidding situation. Floor-heating

and snow melting systems are unforgiving when short cuts are used.

- Use only the highest quality system components.
- Research your system supplier and demand references.
- Clarify whose responsibility it is to stand behind the system's design and performance.
- Don't make an half-hearted effort to get into the floorheating market.

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