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## System technologies remove guesswork

BY JOE FIEDRICH  
*Hydronic heating authority*

When boiler manufacturers talk about their products, they don't just talk about boilers, they talk about their boiler system. They describe their pre-engineered, plug-in heating plants that contain every component, from burner to reset control, integrated and fine-tuned to form a unit with optimum performance that's simple to install.

Wall-hung condensing boilers are packaged systems that include circulators, domestic hot water production, an expansion tank, even stainless steel venting systems, all designed to work together under an attractive cabinet. The guesswork of which component should be used with what doesn't exist.

The same is true with floor-heating manufacturers; they don't just talk about tubing and manifolds. They talk about their pre-engineered heat distribution systems with pumping/mixing valve stations and integrated controls. They talk about their tubing grid systems with pre-manufactured insulation and tubing mounting panels ready to receive the tubing. And they talk about training, technical support, design services and liability insurance that guarantee the longevity, performance and ease of installation of their particular system.

Why do floor-heating manufacturers want to develop their own systems? What are the benefits of pre-engineered systems for both the installer and end user?

When the engineering, testing and design have been done by a reputable manufacturer with a proven track record, both the installer and system owner receive the benefit of years of field tests and know-how, a guarantee of trouble-free, long-lasting service.

When a contractor buys a floor-heating system from a single supplier, he knows that all the components are made to work together. The supplier will stand behind its system, whether the issue is performance of individual components or operating efficiency. If something goes wrong down the road, the manufacturer will back the system and be responsible for it.

This eliminates the finger-pointing that occurs when no single supplier has taken the responsibility of recommending what should be used in a certain floor-heating job.

The contractor is usually left on his own when things go wrong on a floor-heating job using multiple manufacturers. The component manufacturers all are convinced that their particular piece of the puzzle is not the problem. When

several suppliers are involved, they cannot agree whether the problem is the wrong pump or valve sizing, tubing failure, incompatible control strategies, improper installation technique, or boiler and chimney damage from incorrect venting and excessive condensation. It's not their system.

The myriad design aspects of a low-temperature radiant system result in a fairly complex overall hydronic system that should not be attempted with adapted old-school hydronic methods and without the support and know-how of good boiler and floor-heating system manufacturers.

The use of system technologies makes sense in terms of cost. About 50% of the total system cost is labor. Contractors who use pre-manufactured systems will find that components go together more easily.

More importantly, the contractor can be assured that the system design is up to date and the recommended installation techniques meet industry standards.

It's up to you to take advantage of the effort, research, training and money being invested by system suppliers for the benefit of our industry.

*The author is president of Stadler Corp. (tel. 781/275-3122), a Bedford, Mass.-based supplier of hydronic heating equipment*