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BIM stations offer system advantages

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Boiler injection mixing stations are the new generation mixing control devices. They may eventually supplant three- and four-way mixing valves, providing an array of advantages.

Injection mixing stations, just like conventional three- and four-way mixing valves, work on the constant circulation principle: Activate the system circulator on the first day of the heating season and shut it off on the last day.

Between those two days the injection control valve modulates Btuh-input, fine-tuning the system perfectly to the requirements of the instantaneous heat loss.

Bim stations enjoy a number of advantages over three- and four-way valves:

Primary and secondary circuits are hydraulically "disengaged" from each other, i.e., none of the high-temperature consumer circulators can interfere with the injection control valve, so the low temperature circuit always has stable supply temperature modulation. Hydraulic interference of high-temperature circulators with three-way mixing

valves is the single biggest cause of unstable supply temperature control and valve hunting.

It's impossible to pipe a Bim station incorrectly, thus assuring proper system control functions at all times.

Bim stations provide tremendous flexibility, allowing different control strategies and options, which are not possible with three-way plug and seat valves or three- or four-way rotary mixing valves. For example, you can use non-electric controls for supply temperature control, based on outdoor reset, room temperature only, fixed water temperature only or a combination of any two of the above.

Bim stations are ideal for creating multi-temperature systems.

Because of that flexibility using electronic and non-electric control strategies, the bim station can be custom tailored to any application, whether control cost vs. system size is an issue or whether system simplicity or sophistication in control approach is an important requirement.

Supply water temperature high-limit protection is an extremely important

issue for floor-heating systems to prevent serious finish floor damage. You can accomplish this easily and inexpensively with non-electric actuators on Bim stations.

Both the injection and the high-limit control valve on the Bim station work independently from each other with any of the above mentioned control options. Consequently, you can mix and match any combination of control strategies, whether you are using high-tech digital microprocessors or simple, inexpensive and reliable non-electric "Fred Flintstone" controls. This helps eliminate service calls and start-up problems and will dramatically reduce your stomach acid.

Bim stations are ideal for creating multi-temperature systems with zones for domestic hot water, radiators and fan coils, plus a low-temperature radiant loop. The equipment and piping cost is a fraction of having to use expensive mixing valves and associated actuators, electronic controls and control wiring — and all the troubleshooting, startup testing and fine tuning they require.

If you're working on a retrofit or remodeling job, you'll probably end up with a multi-temperature modulating floor system that combines staple-up and wet systems underneath tile, wood flooring and wall-to-wall carpeting. Bim stations are better suited to multi-temperature systems because they can reduce zone control cost (powerheads) and

provide better water temperature control, custom tailored to different floor finishes and system designs.

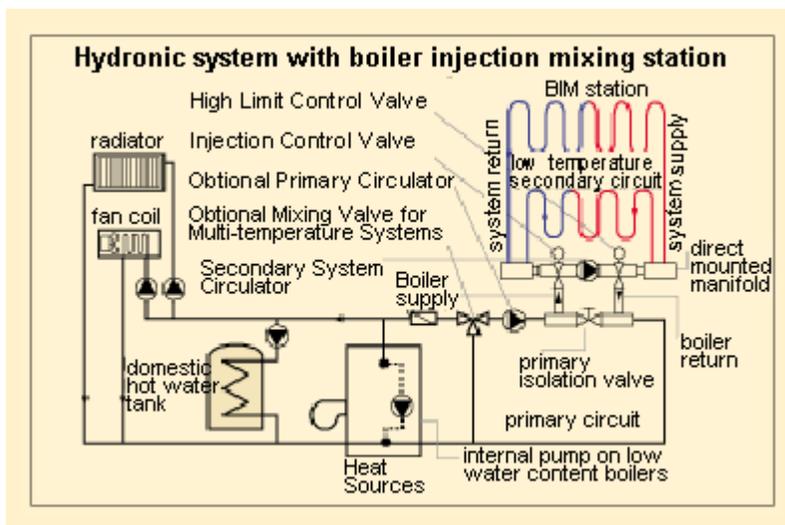
Multi-temperature bim stations, in combination with a single mixing valve installed in the primary loop and a non-electric high-limit control on each station, provide cost-effective control with every conceivable comfort and safety feature incorporated.

A pre-assembled and pressure-tested bim station eliminates potential piping mistakes in the field. A bim station comes complete with a circulator, two modulation valves, primary isolation valve, supply and return manifold connection for direct or remote satellite mounting, as well as a primary loop section with injection lines.

Whether you're designing a multi-temperature or a single-temperature system with a primary circulator, a bim station provides additional pre-tempering of the boiler return water, which can be a desirable feature for certain boiler designs.

Low water content boilers with internal boiler pumps that interfere with mixing valves or wall-hung boilers that don't provide enough water content for proper mixing valve operation are a perfect match with bim stations.

Boiler injection mixing stations provide nothing but advantages, no matter what type of hydronic system you are designing or heat source you are using. They are capable of providing the proper tech-



When used as a multi-temperature system, only one properly sized primary circuit and circulator are necessary. All primary isolation valves are in the fully open position. On a single temperature system, no primary circulator is required. The primary isolation valve is in the closed position. The secondary system circulator will move the water to and from the boiler through the primary loop as well.

nical solutions in a simple way without turning radiant system controls into rocket science. Try one, you'll love it!

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