

## FOCUS

## Hydronic and Radiant Heat Products

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Contractors who've added hydronics services to their portfolios admit it's not as difficult as it seems.



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Radiant heating and cooling is establishing a foothold in the residential HVAC market.



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Hydronics growth is being driven by a number of trends, including contractor awareness, application versatility, and more.



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## the NEWS

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# Awareness, Versatility Driving Hydronics Market

*Hydronics products are becoming more energy efficient and consumer-friendly*

BY NICK KOSTORA  
THE NEWS STAFF

**G**rowth in the hydronics sector is being driven by a number of trends, including contractor awareness, application versatility, its ability to serve as a secondary heat source, intelligence, affordability, and more.

Manufacturers are finding unique ways to advance the technology in this segment of the HVAC industry while also being consumer-conscious and ensuring the first-cost barrier that has restricted the market's growth in the past is chipped away.

### CONTRASTING COST AND COMFORT

"First costs continue to be a factor in the growth of hydronics in the marketplace," said Mark Hudoba, director of heating and cooling at Uponor. "The cost of the system is why homeowners desire smaller, more affordable systems. Radiant systems are popular choices — most often in basements or master bathrooms — as customers feel like they're getting the most value out of the improved comfort, but are limiting the size of the installation to reduce the total price tag."

Rich McNally, eastern region sales manager, Watts Water Technologies Inc., insisted contractors sell the comfort, not the price.

"There is some growth in the multifamily market, but hydronic systems can't compete with heat pump systems that provide inexpensive heating and cooling unless comfort and operational efficiency are factored in more persuasively," he said.

Whether it's comfort or cost, Dave Salyer, product manager, WaterFurnace Intl. Inc., said hydronics can be customized in any form or fashion.

"That's honestly the real power of hydronics when you look at it," he said. "The systems can be as complex or simple as you need, depending on the application. As more tools and products are introduced to the marketplace, hydronics applications are becoming more feasible for contractors."



**PUMPS AND PEDESTALS:** Steve Bothell, Weldin's lead foreman, attaches a pump pressure gauge to one of the main Taco LoadMatch pumps for the two 3-inch primary mains at this Professional Military Education Center. The heavy-mounting pedestals allow floor support for the pumps, which is especially important in seismic regions.

### TALKING TECHNOLOGY AND EFFICIENCY

A focus on improving comfort and operational efficiency was clear for the hydronics industry this past January at the AHR Expo. Everything from condensing boiler options, combi-boilers, circulators, geothermal and solar-thermal components, and control systems were all trending toward better efficiency. Manufacturers are continuing to make efficiency a priority as the calendar ticks to 2016 and beyond.

"The hydronics market will continue to shift to the use of smaller-footprint gas-fired boilers with a condensing/modulating capability for achieving greater efficiencies," said Goncalo Costa, director of product marketing, Bosch Thermotechnology Corp. "Wall-mounted boilers also have design advantages that appeal to homeowners because they're off the floor and out of harm's way in case of a



**PROPERLY POSITIONED:** Taco circulators are lined up during preassembly of near-boiler piping performed by the hydronics professionals at Romeoville, Illinois-based manufacturer's rep firm and custom manufacturer, Metropolitan Industries Inc. They prepared 19 fully assembled, split-skid boiler packages to reduce down time during installations at an apartment complex by Plainfield, Illinois-based plumbing and mechanical contracting firm DRF Trusted Property Solutions.



**WATCHING THE WATER:** Scot Walston, head service technician for Proctor Mechanical Corp., Des Moines, Iowa, adjusts the water flow through a Taco Inc. balancing valve.

high water incident or flooding.”

Costa highlighted Bosch’s Greenstar line of wall-hung, gas, condensing boilers as an efficient hydronics product that is often used as a direct replacement for an existing boiler to provide improved efficiency and comfort.

“The rapid growth of, and demand for, highly efficient electronically commutated motor (ECM) variable speed circulators are a driving trend, as well,” said McNally. “Couple these with high-tech, intuitive controls that optimize energy efficiency, and you have two of the biggest trends in the industry.”

### SIZE AND CHARACTERISTICS

“Smaller, simpler, and more affordable radiant systems continue to become more popular,” said Hudoba. “While radiant floor heating systems initially grew in the luxury home segment, simple and affordable systems are being installed more and more. And, these simple systems can make it financially feasible for more homeowners to enjoy the comfort and energy efficiency that radiant floor heating provides. A simple

system installed in only a portion of the home — like a basement, garage, master bathroom, and/or kitchen — is both efficient and affordable.”

“Another significant trend in the hydronics market is the replacement of metal piping with PEX tubing,” continued Hudoba. “Traditionally, water-based HVAC systems used copper or other metal piping to transport hot and cold water from boilers and chillers to fan coils and other terminal HVAC units. As is being seen in the commercial plumbing market, PEX is replacing metal pipe due to better material costs, installation efficiency, reliability, and performance.”

The Internet of Things (IoT) is also an important factor that continues to impact the world of HVAC, including hydronics.

“We’re responding to a demand for home connectivity,” said Costa. “Mobile devices and residential-based controls offer great potential for enhancing the user experience with heating and cooling systems that are now increasingly perceived as environmental comfort systems. They also can save on energy use.”

### CONTRACTOR AWARENESS

As trends develop and present themselves, it becomes even more important for contractors to keep up with what’s happening in hydronics and plan accordingly.

“Contractor awareness has definitely been increasing over the last several years,” said Salyer. “This has been driven by a number of factors, including the desire for greater comfort and more installation flexibility. Additionally, the need for higher-efficiency solutions for boiler replacements has been a factor, as well.”

McNally said it’s encouraging to see just how many contractors across the country are showing interest in hydronics.

“Broad interest in radiant

heat has been the key for this growth, but applying the technology on the job remains several steps behind the broader interest in it,” said McNally. “But, one of the maxims I like to use is, ‘Design is everything; installation is simple.’ This holds true and seems to have a positive impact on those who contemplate it.”

That interest in radiant heat and attempting to push the limits of what it can do is apparent throughout the industry.

“One of the larger trends in the marketplace is the ability to go beyond just radiant floor heating,” said Salyer. “Many customers have the desire to handle all of their heating and cooling needs, as well as domestic hot water, with one hydronic

system. This is especially true in retrofit applications where a home might be going from just radiator-based heat to being able to have both air conditioning and heating.”

To keep up with this trend, WaterFurnace has a complete line of water-to-water heat pumps, as well as many of the required accessories, for complete hydronic systems. The company’s HydroLogic control panels offer additional contractor benefits for installation and control.

“Contractors go where opportunity exists,” said Hudoba. “As the trends for residential and commercial hydronic systems continue, contractors will continue to adjust to accommodate the needs of the market and their customers.”

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