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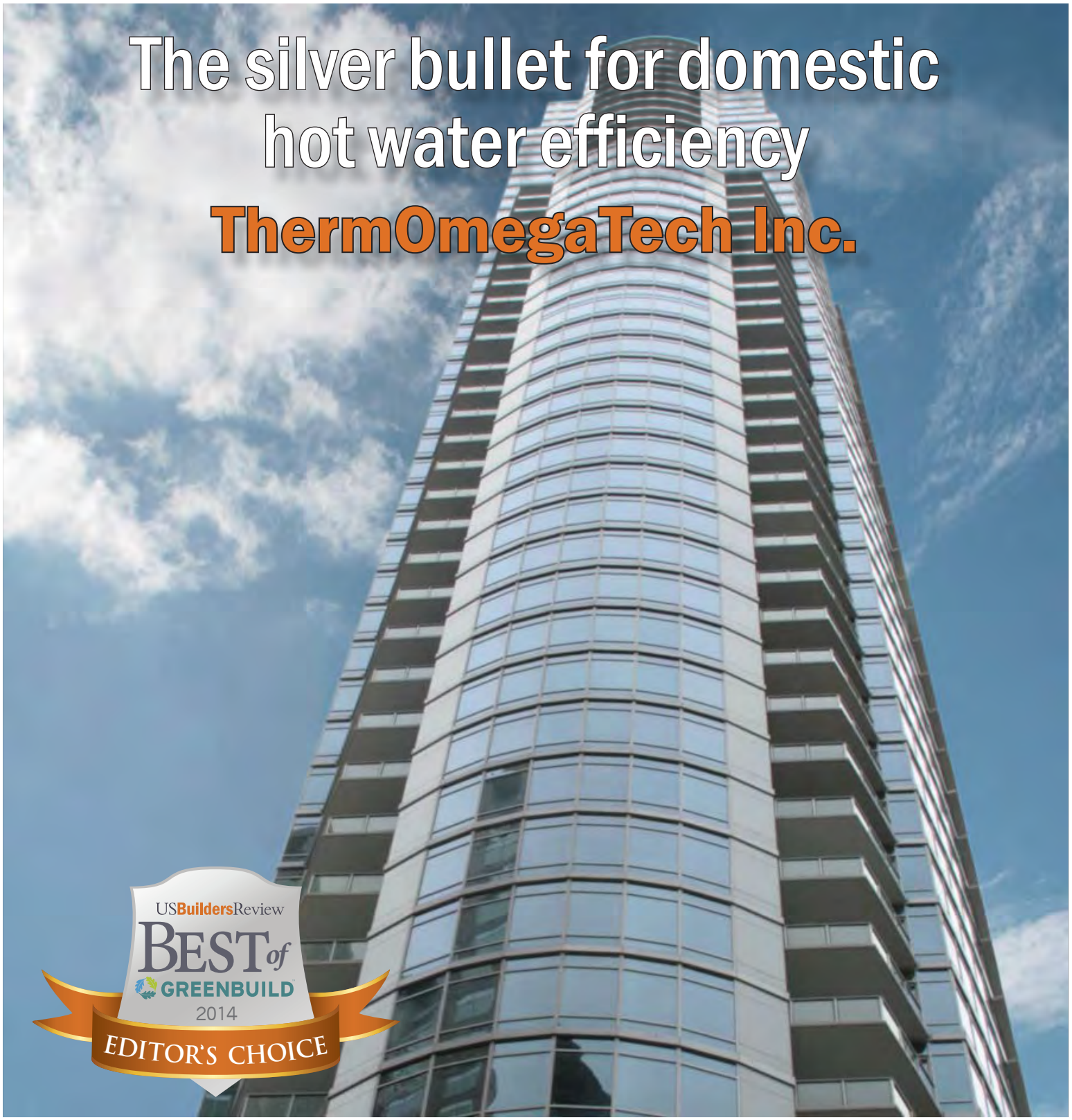
USBuildersReview



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The silver bullet for domestic hot water efficiency

Produced by Ian Nichols & Written by Molly Shaw

For years, manual balancing valves have been the industry standard in regulating the flow of recirculating domestic hot water systems. Particularly in large, populous commercial buildings, such as offices, hotels and multi-dwelling housing, maintaining perfect hot water distribution was very challenging until Pennsylvania-based manufacturer ThermOmegaTech Inc. launched its self-operating temperature actuated Circuit Solver thermal recirculation valve (Circuit Solver) and set a new standard.

"Even people who are very knowledgeable with years of experience in the industry are impressed with what Circuit Solver can achieve," shares Nick Tallos, vice president of engineering for ThermOmegaTech and 40-year industry veteran himself. "They ask, 'where was this 20 years ago,' and call Circuit Solver a game-changing technology."

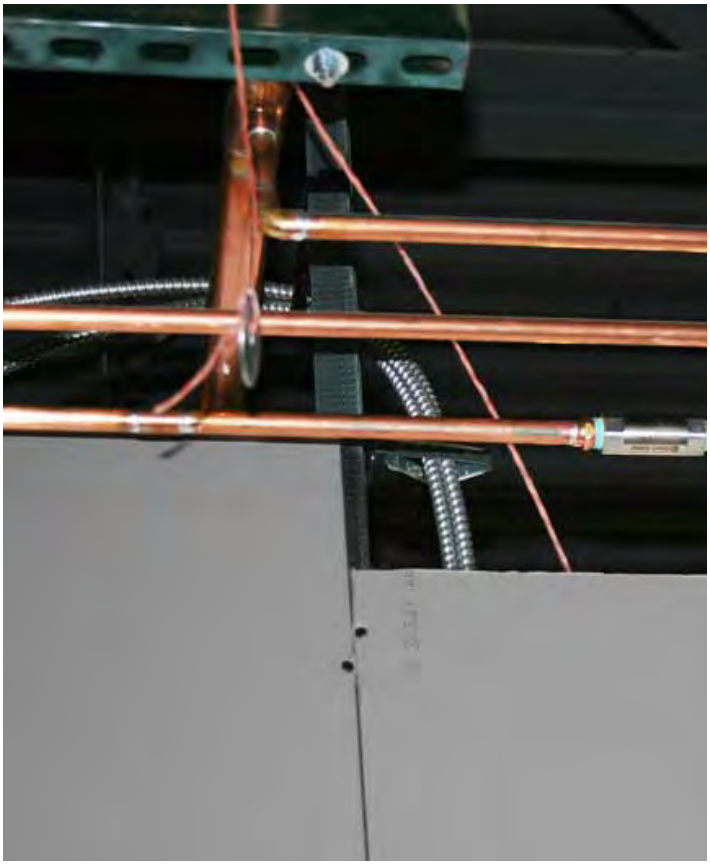
However, ThermOmegaTech is no stranger to game-changing products. Since the company was founded by the late Fred Pirkle in 1983, it has been solving temperature control problems all over the country and the world.

"I was working with Fred before he started ThermOmegaTech," recounts Tallos. "He was working as a sales representative for another company when he was

offered a position in product development in Pennsylvania. A few years later, in the early 1980s, he decided to start his own company."

Setting the standard early on

ThermOmegaTech's first breakthrough product was the highly reliable, cost-effective freeze valve for the railroad industry. "The freeze protection valve has become the industry standard and almost every diesel-electric locomotive in the U.S. has our products," reveals Tom Ruggierio, director of sales and marketing for ThermOmegaTech. "We now have 98 percent of the market share for Class 1 locomotives in North America."



"Our freeze protection valve is critical, because a locomotive has 300 to 500 gallons of coolant circulating through to keep the engine temperature down, but antifreeze is not compatible with the diesel engine technology," adds Tallos. "If the coolant freezes it means a major risk to the engine, not to mention huge costs due to lost operating time."

The freeze valve is still one of ThermOmegaTech's most important products, but Tallos says the company has grown to fit the needs of numerous other industries and applications. "We took the freeze-valve technology and started applying it to other problems our customers in the petrochemical and industrial arenas had," he explains. "If we saw an opportunity to make a device to solve their problem, we did, and steadily they've become standard products."

From locomotives to commercial dishwashers, ThermOmegaTech's technology can be found in almost every corner of industry. ThermOmegaTech has developed a wide range of valves and systems for the industrial market, including valves for scald protection, steam traps, ambient sensing, surface sensing and more. The company also has mixing valves for water and steam-water applications, which have been incorporated into wash down stations for hot water wash down and instantaneous tepid water heaters.

The most recent generation of ThermOmegaTech's game-changing technology is the Circuit Solver and its ability to regulate and cut costs in recirculating domestic hot water systems. "The Circuit Solver is just an extension of the self-operated valve technology we've been working on for 30 years; we're just adopting it to other arenas," explains Tallos.

Bringing a balance

Circuit Solver is a simple, yet extremely effective way to maintain domestic hot water distribution throughout any building. Installing Circuit Solver downstream of the last fixture run out, and before it tees into the common return line, will assure specified hot water temperature distribution.

How does Circuit Solver accomplish such a feat? The secret is in the patented thermostatically active flow control valve. As water enters the valve, the thermostat senses the temperature and increases or decreases flow based on the water temperature and the valve's set point.

"This allows the right temperature water to always be readily available at the tap," explains Tallos. "We're manufacturing the valves out of stainless steel, so they're certified to NSF 61 and AB 1953 for potable drinking water – there's no lead or other dangerous contaminants. The product can easily be added to the old systems, as well, so it's a tremendous retrofit solution."
"Circuit Solver is part of a total solution for recirculating domestic hot water systems and it allows the plumbing engineer to design the system without oversizing the pump," adds Ruggierio. "This is where the big energy savings lie in more efficient pump selection." In addition, there is a tremendous labor savings by eliminating the need to manually balance the system decreasing start up time and eliminating the frequent need of call backs.

In-house operations

Not only is ThermOmegaTech manufacturing a safer, more efficient product, the company is also doing 95 percent in-house; that's right – made in the U.S.A. "We have a 37,000-square-foot manufacturing facility and office just outside of Philadelphia," shares Ruggierio.

Components are manufactured utilizing the latest CNC turning and milling machines. All valves are assembled and calibrated using state-of-the-art tools and inspection equipment. In February 2000, ThermOmegaTech became ISO 9001-certified.

"One of ThermOmegaTech's key priorities is continuous improvement," details Ruggierio. "This is manifested by our lean culture. All of our production personnel go through formal lean training."

Today, the company is shipping products on a national and international scale. "We're still a relatively small company, so we are establishing a network of plumbing sales representatives to be our feet on the street," notes Ruggierio

COMPANY AT A GLANCE

Established : 1983
VP of Engineering : Nick Tallos
Employees : 65

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Ruggierio and Tallos say the response Circuit Solver has received from national plumbing engineers, contractors, builders and other professionals across the industry is phenomenal. "The response has truly been tremendous, especially in strict green states, such as California, where they're required by code to shut recirculating water pumps off," tells Ruggierio.

ThermOmegaTech is excited to once again showcase Circuit Solver at Greenbuild 2014, now, better than ever. "Now we have more case studies and a whole other level of credibility," ensures Tallos.

"There's a good buzz around it and it's not just Bourbon Street," he jokes. "We hope to have the opportunity to meet with more people in the variable frequency drive pumps market and form partnerships, because Circuit Solver lends itself to this type of technology."

Dubbed the silver-bullet solution to domestic hot water issues, Circuit Solver is actively expanding its global sales network, and with it ThermOmegaTech Inc. is growing by leaps and bounds.

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