

# VENDOR PROFILE >

TACO, INC., CRANSTON, RI

*"Taco Puts Emphasis on Product Innovation"*



Taco's Innovation and Development Center

There's a restless manufacturer in the plumbing and mechanical industry. They've gained a leadership position through decades of innovation, always attentive to customer needs and opportunity for improvement. The company is Taco, Inc., a leading developer and manufacturer of plumbing and hydronic-based heating and cooling equipment and accessories for use in residential, commercial and institutional applications worldwide.

Taco traces its roots back to 1920. Within a few decades, Taco was developing wet rotor circulators that are still being refined today.

As a privately-owned firm, President and CEO Johnny White Jr. maintains his focus on product development, customer service and devotion to his growing family of employees.

Today, Taco employs about 500 people at facilities in Cranston, RI, Fall River, MA and Milton, Ontario. The firm sells direct to OEMs and through leading wholesalers nationally.

## Living hydronic and home comfort

"Meeting customer needs or, even better yet, solving them before a need or challenge arises, is the sole reason for our existence," says White. "It's why we're here. We live hydronic systems and indoor comfort as though they were programmed into our brains.

"Being in this business pretty much since birth, I've marveled at our growth and diversification," said White. "Each employee, engineer, designer and manager contributes to this company in unique ways, in ways that inspire me and others here.

"The genesis of every good thing to bear the Taco name starts right here in Cranston, Rhode Island," continued White. "Our employees are the greatest treasure of all because of the pride they take in the work they do, and in the way they work so well together. In the grand scheme of things, we're a small company,

but we've learned how best to make a big impact in a global market."

## At the core: product innovation

Taco managers today emphasize their focus on systems. "Though we started with a concentration on components, the company shifted to an emphasis on the system about 20 years ago," said Mark Chaffee, director of brand marketing.

"Hydronic systems now can source heat from the ground, or the sun," added Chaffee. "We can mix heat sources and offer more traditional fueled-system as back-up heat. Of course, domestic water can be married to this, and there's even the integration of hydronics with forced air – visible on the residential radar, but much more prominent in the commercial market."

## Popular Taco products and technology include:

- Hydronic circulators and pumps of all variety and size
- Domestic hot water recirculation systems
- Expansion tanks
- Zone, pressure and mixing valves
- Air separators
- Heat exchangers
- Water and gas shutoff valve for water heater safety
- HVAC controls (iWorx - combining HVAC and hydronics)
- LOFlo and LoadMatch systems for commercial systems

Known for its innovative technology, Taco has recently shored-up its investment in training for trade professionals with completion last year of its Innovation and Development Center.

Taco's "IDC," consisting of a two-story 24,037 square foot addition to the current building, a state-of-the-art learning and training environment, complete with new classroom spaces, conference rooms, a business center, and functional labs for testing and



Taco's IDC Mechanical Room

teaching.

The Center displays and provides a hands-on learning environment for the best equipment and systems that today's HVAC industry offers for comfort, efficiency and sustainability. The HVAC products and systems will be visible throughout the entire facility forming "living laboratories" that allow for close-up viewing, hands-on learning and teaching.

The LEED Gold Innovation Center project, along with office area renovations now under way within the existing building, will provide the space the company needs to grow and to remain competitive while remaining in RI, where the company has been operating since 1942.

So it's now from a position of strength that Taco pushes forward with product development at warp speed.

Illustrative of Taco's emphasis on product innovation is this impressive line-up of new products:

### SmartPlus

An average family of four wastes 12,000 gallons of water a year because of the unnecessary wait for hot water to reach showers and faucets. In most cases, homeowners not only pay for water that goes down the drain, but to get rid of it as well. Of course, heating costs increase because of it as well.

That's why Taco recently introduced the SmartPlus circulator for use with domestic water systems that include a dedicated hot water return line. Builders and remodelers with a focus on sustainability and "green" will find this technology to be a big asset when making "green" recommendations to homeowners.

The technology self-adjusts. When set to "smart" mode, the SmartPlus circulator records each time hot water is called for during a seven day period and then duplicates the pattern for the following week. This energy saving process happens continuously, so hot water is ready when it's needed. With SmartPlus, the average household can save up to 12,000 gallons of water in a year.

The SmartPlus can also be set to "pulse" mode. It will operate for 150 seconds every ten minutes, maintaining hot water at all fixtures.

Whether in "smart" or "pulse" mode, the circulator will automatically enter "vacation" mode if hot water is not used for 36 hours. In this mode, water will be circulated once a week to prevent corrosion and scale buildup. When hot water is again called for, the unit will go back to normal operation.

**Bumble Bee:** residential/light commercial ECM, Delta-T circulator – At this year's AHR Expo, Taco introduced its next generation Bumble Bee high-efficiency variable speed circulator – model HEC-2.

The Bumble Bee is a wet-rotor circulator using the very latest in ECM, permanent magnet motor technology. It uses up to 85% less electricity than a standard circulator, and its out-of-the box settings and 360° swivel flange makes it easy to install.

The right circulator needs to do more than just move water. Taco's exclusive Delta-T technology boosts electrical savings by 15-19 times by making the entire system run more efficiently.

With the ability to determine the exact flow required to match ever-changing building heat loads, the Bumble Bee can reduce boiler short cycling, increase total system efficiency, maximize energy savings and improve consumer comfort.

The Bumble Bee operates over a broad performance range, with flow up to 15 gpm and head up to 15 feet. Factory pre-set to run in Delta-T mode, it can also be programmed for variable



speed setpoint operation to maintain a fixed supply temperature or dialed-in to one of four fixed speeds. With all the options, the Bumble Bee is an ideal choice for many hydronic, radiant heat, boiler protection, fan coil and snowmelt applications – residential or light commercial.

**Viridian:** light commercial ECM, Delta-P pump – This flashy newcomer is Taco's commercial, ECM, wet rotor Viridian pump, offering up to 80 percent savings in energy consumption compared to a standard commercial pump of the same size.

With fully automated, self-sensing variable speed operation, simple web style controls and capacities up to 375 GPM, the Viridian line serves a broad range of closed-loop heating and cooling HVAC applications.

An Ethernet connection to the pump allows for remote control, monitoring and adjustment without requiring the involvement of IT or commissioning personnel. Any Viridian pump can be instantly accessed via a laptop using standard internet browsers or any Wi-Fi enabled device or smartphone.

Recently included in programs like the BC Hydro Energy Initiative and National Grid's energy saving rebate, the pump provides a three year or better return on investment.

**FuelMizer:** for smarter outdoor reset – Taco's FuelMizer™ outdoor reset switching relay is a microprocessor-based control designed to regulate the supply water temperature of a single boiler, based on the outdoor temperature. With reduced supply water temperatures, substantial energy savings are achieved.

The FuelMizer is a boiler reset control and switching relay in one unit. The device is ideal for retrofits but may also be used for new installations.

Including functions such as automatic reset, ratio calculation, warm weather shut-down, minimum boiler temperature settings and boiler differential settings, the FuelMizer's control

monitors both boiler and outdoor sensors. It is capable of controlling a system or zone valve circulator, as well as overriding outdoor resets when a DHW tank calls for heat.

The FuelMizer is easy to install and set. Contractor friendly with logical layouts and intuitive, easily customized controls, the FuelMizer will not affect the boiler's warranty. It includes front-mounted LED lights that provide full diagnostic information.

Typical energy savings are about 14%, though some customers have experienced up to 30% reductions in energy used once the FuelMizer is installed.

**Zone Sentry Zone Valve:** to improve the performance of any zoned system –

The Zone Sentry's patented technology uses a microcircuit-based logic to control a gear-driven electronically-actuated ball valve to control fluid flow. The advanced design uses 93% less energy than common zone valves while also delivering greater flow capacity, shutoff pressure rating, ease of installation and diagnostics, and the number of valves (12) that can be used on a standard 40VA transformer.

Ideal for use with a wide variety of heating and cooling applications, Zone Sentry valves were designed primarily for baseboard, fan coil, radiator, convactor, heat pump and radiant applications. The valves are available in ½", ¾", and 1" sizes and draw only 1.44 watts, making them a high efficiency addition to residential and light commercial applications.

The Zone Sentry is easy to install and operate. The forged-brass valve body can be installed in any direction or orientation and the one handed lift-off actuator means that tight space is no longer a factor.

Snap-in quick connects on the back of the valve make for simple, secure and fast wiring hook-up. A green multi-function LED light shows the valve's operation and thermostat status. The valve's manual override button with auto re-engagement allows the ball to be rotated to any position and is marked with a slot to indicate the exact position of the valve.



**LOFlo injection mixing for chilled beams:** the ideal way to optimize commercial radiant cooling systems – Taco has introduced the LOFlo Radiant Cooling System, designed to supply both cooling and heating for large interior spaces.

Hydronic systems use approximately half the horsepower and half the materials to move heating and cooling energy around a building when compared to forced air systems. In contrast, Taco's LOFlo injection mixing system uses only one-third of the energy and materials to move heating and cooling energy within a building's interior when compared to air systems.

Low flow radiant convective cooling eliminates condensation problems by decoupling latent and sensible cooling.

**FloPro Designer:** everything an installer needs to design hydronic systems and – free to Taco FloPro members – the price is right!

One of Taco's most powerful FloPro Team services is the newly-enhanced design software package that's almost as intuitive as a sketchpad, but greatly more capable. Best of all, it's free to all FloPro Team members – allowing you to Do Your Best Work.

The layout and heat loss design suite enables contractors or designers to define building exterior and interior spaces, external influences, and to build and specify components for a host of hydronic, radiant heat, water heating and HVAC applications. With every change, the program dynamically changes calculations and their impact on other components within the system.

With FloPro Designer, you simply draw the floor plan, drop in windows and doors and, in an instant, installers or designers have accurate heating and cooling loads.

The new "side drawing" capability now allows installers to draw up a complete boiler room to scale with every component, pipe size and length, pump model, ball valve and boiler type included. Or, a designer can draw the picture, print it out and give it to an installer who takes the illustration to the job to be installed exactly as shown.

So, for your next system design, sign up as a member of Taco's FloPro Team – among the many benefits – download the most powerful, intuitive design tool on the market today, for free.

## Project FloPro

Another key development is Taco's neighborhood for social networking: [www.floproteam.com](http://www.floproteam.com).

"Taco's FloPro Team concept is a successful, multi-level program that builds affinity between contractors nationwide," says mechanical contractor Ross Goldstein, Ross Mechanical Group based in Huntingdon Valley, PA.

"I've been an active FloPro member since I learned about the 'community' they were building," he added. "Since that time, Taco's added incredible depth and capability to their service. I'm hooked."

Simply log on, join the FloPro Team and John Barba, Taco's director of training, at the helm. You'll join a quickly-growing "neighborhood" of experts looking for industry news and insights, gained through online and call-in technical support, videos, podcasts and more.

Taco sells its products through wholesalers, and is represented in the field by independent sales representative agencies. The company also sells products direct to original equipment manufacturers (OEM), mostly to boiler and fan coil manufacturers.

The company can be found online at [www.taco-hvac.com](http://www.taco-hvac.com).