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# Heating system master

## Meeting with John Perry Jr. of Advanced Comfort Systems

BY DAN FOLEY

I first met John Perry Jr. over 20 years ago. We have become fast friends over the years, as we run similar companies. We often exchange phone calls, texts and emails as we compare notes or resolve problem jobs together. My technicians regularly call John with questions because they know he will quickly guide them in the right direction.

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John's company, Advanced Comfort Systems is based in North Smithfield, Rhode Island, near Providence. He and his father started the company in 1998 when they did their first radiant project. He now has seven employees and recently moved into a new office complex with an office, detached warehouse and several other buildings on the property he rents out.

John is unique in this business in that he is a skilled craftsman and technician as well as an astute businessman. Both skill sets are necessary as technical skills are worthless if you can't stay in business and pay the bills. John is the rare individual that is a master of both.

John's background was working on electronics and avionics in the Air Force. This background has served him well in designing and installing elaborate mechanical control systems. Wiring and controls can be among the most difficult skills to master, but John was already well



John Perry Jr. owner of Advanced Comfort Systems, North Smithfield, Rhode Island

versed in electronics well before he got into the trade. The transition to heating system controls was easy for him.

On one of his first complicated radiant jobs, the owner requested that an engineer design the project. When the controls would not "talk" to each other, the engineer was beckoned to the site for a meeting. The owner and GC soon realized that Perry knew more about the controls than the design engineer. That is when John knew he was hooked on hydronics and radiant.

One fact I learned about John and his company amazed me. They are incredibly specialized and loyal to the brands they use. They only do hot water and radiant heat with side specialties in domestic hot water (DHW), geothermal systems as well as solar. They don't do AC, plumbing, steam, forced air or ductwork. They also only install and service Viessmann boilers. They



Control panel for a mechanical system Perry installed in a new private residence overlooking Narragansett Bay

only use Taco pumps and hydronic specialties. They only use Uponor radiant tubing and manifolds.

At first, my reaction to this specialization was that it would inhibit growth and future business. I soon learned that there were good



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Three Viessmann Vitocrossal high-efficiency commercial boilers installed at Portsmouth Abbey School



John Perry Jr. with John White Jr. CEO of Taco

reasons why John chose this business strategy. Meetings with two of his industry partners soon enlightened me.

### Taco

We walked through the back door at Taco. John wanted to show me some of the work he did there. John and his employees piped many mechanical systems in the addition that recently went up. He also piped several test labs in the building where Taco products are tested and analyzed before being released to the market. John has his own security card that allowed access to locked doors. As we walked through the facility, Taco employees smiled and waved as if he were one of them. John knew them all.

After a brief tour, we went upstairs to a scheduled meeting with John White Jr. CEO of Taco. We discussed the fact that Perry only uses Taco pumps and specialties. White had some telling comments regarding their partnership.

White said, "When we decided to build this addition several years ago, John Perry was part of the design team. He met with our engineers and mechanical designers. It was a natural choice to use John and his company for the mechanical work in the building. We trust him implicitly, and we consider him part of the Taco family."

White went on to explain how Perry earned the trust of his company by representing his products well in the field. He noted Perry's problem-solving ability and can-do attitude. He mentioned a time when a repair was required at the facility, and Perry responded immediately to fix the problem.

When asked why he thought Perry uses Taco exclusively, White responded, "John knows Taco products and believes in them. He trusts the products and the people behind them. Loyalty works both ways and personal loyalty is forever. Nothing can transcend it."

For his part, Perry likes the quality of the Taco products. He has a close working relationship with Taco's product engineers and has helped with R&D on several Taco products. When he had a problem with one of their valves, Taco sent their engineering team out the job site to resolve the problem. White is correct. Loyalty is a two-way street, and in this case, it benefits both parties immensely.

### Viessmann

We then traveled about 20

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Dr. Michael Luz, CEO of Viessmann US, with John Perry Jr. in the Viessmann training lab.

minutes down the road to a meeting with Dr. Michael Luz, CEO of Viessmann U.S. We toured their test lab with live fire boilers, several of which John had installed for Viessmann.

John explained that he likes Viessmann's commitment to top-quality boilers and heating products. He likes that they are local and that he can get parts or products quickly in a pinch. He has gone through all

of the training on Viessmann boilers, controls and products, and is C-Pro trained and certified to perform factory start-ups.

Dr. Luz mentioned John's commitment and loyalty to Viessmann and his technical expertise. "John has the ability to sell and confidence to recommend a higher priced alternative to his customers."

Dr. Luz explained that the future of the business is to forge long-term relationships and partnerships such as the one he has with Perry.

Luz said, "John is a trusted resource to Viessmann."

John's loyalty to Viessmann has been rewarded by recommendations by Viessmann for future work. John has also been referred to problem jobs, representing the brand well.

### Restaurant job:

The first project we surveyed was a boiler/DHW job in a local restaurant John did a couple of years ago.

He was called in to fix a heating/snowmelt/DHW system that was under-performing. There were areas of the restaurant that did not heat well, and the snow/ice melt system did not function properly. By far, the biggest problem was a lack of enough hot water to run the dishwashers. For a restaurant, this is a big problem as dishes stacked up while they waited for the DHW tank to recover.

John came up with a creative solution. First, he replaced the cast iron 80 percent boiler with a Viessmann Vitocrossal high-efficiency condensing commercial gas boiler. He added several radiant floor heating zones to resolve the heating issues. He re-piped the heat exchanger and control valves serving the snow/ice melt zones and added the proper sensors and controls that were missing.

John's solution to the DHW problem was impressive. He started out by replacing the undersized 80-gallon tank with a 119-gallon Viessmann V-300 stainless steel tank. He chose the solar model with two heat exchanger coils tied together in series. This doubled the amount of heat exchanger surface area for greater heat transfer and quicker recovery. By piping the coils in series, the delta-T through the circuit is increased, lowering the return water temperature back to the boiler. Condensing boilers operate more efficiently when return water temperature is minimized.

John employed one more trick, which I thought was ingenious. Domestic cold water is run through



Two Viessmann Vitorond oil boilers and a DHW tank installed in a private school



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a heat exchanger before feeding into the Viessmann indirect tank. Boiler return water is run through the opposite side of the heat exchanger. This serves two purposes: 1. The incoming domestic cold water is pre-heated increasing the DHW production. 2. The boiler return water is cooled down, maximizing the boiler efficiency while producing DHW.

The new system keeps the restaurant guests nice and warm while producing almost unlimited 180 F hot water for the dishwashers. John's unique problem-solving ability satisfied his client and keeps his company's skills in demand.

### Private school

The next job we looked at was a private school in Portsmouth, Rhode Island. John replaced an old energy hog oil boiler with two Viessmann Vitorond cast iron, three-pass hot water boilers. He also installed a Viessmann indirect tank for DHW. John neatly re-piped the boiler room and insulated the piping. This was phase I of the project. Phase II is to replace the pumping station with two Taco Viridian commercial ECM pumps later this year. John has already replaced boilers in multiple buildings on this property with several more to come this fall.

All of this work is by referral, the same as all of his jobs. John does not do any traditional advertising. His work is his calling card.

"Do good work and take care of your clients," John says, "and you will have more work than you can handle."

For a small company, he certainly

can handle some pretty big projects, including the next one we looked at.

### Portsmouth Abbey

We visited Portsmouth Abbey, a private school located about 45 minutes from Providence. John first got involved with this job several years ago by fixing a botched boiler installation. The maintenance supervisor was so impressed with John's professionalism, knowledge and skills that he will not let anyone else work on his boilers. John has since installed close to two dozen Viessmann boilers in various buildings as well as DHW, snow/ice melt and solar projects on the campus.

John was called in to resolve high fuel bills and comfort issues in the main administrative building. Iron Fireman and Cleaver-Brooks steam boilers heated the building through a steam-to-water heat exchanger. These boilers were past their useful life, and a change was necessary. Breakdowns and repairs, as well as energy costs, brought this to a head.

John's solution was to remove the three steam boilers, piping and heat exchanger. He replaced them with three Vitocrossal condensing boilers. The boilers are common vented using stainless steel vent. A 24-inch stainless steel flue was dropped down the existing chimney. All the piping in the boiler room was re-piped and insulated. When the maintenance supervisor saw John and his crew using a laser level to line up the new piping true and square, he knew he had selected the right company to do this job.

The system pumps were replaced with variable frequency drive (VFD) controlled pumps to dial in and optimize system water flow. The boilers are staged by an outdoor reset control, which maximizes comfort and efficiency.

There was one issue after the job was finished. A large auditorium that was once the warmest room in the building was cold. After some investigative work, John soon found the problem. Control valves on several of the large convectors in the auditorium were not functioning and would need to be replaced. They had been broken for some time, but no one ever noticed. The auditorium is on a structural concrete slab directly over the boiler room. The waste heat from the old steam boilers below

gently heated the tile floor above. The new boilers did not have this uncontrolled waste heat cutting off the source of heat to this room. John replaced the control valves restoring heat to the auditorium.

### Prefab

I took a tour of John's facility where he moved two years ago. Previously, he worked out of his garage, but he outgrew it. The neighbors complained about the trucks, trailers and deliveries, so he moved into a commercial space nearby.

A detached garage serves as his workshop. He prefabs hydro-panels in a well-lit, heated space where he can work easily and control quality. Parts and tools are readily available in his shop versus piping the panels on the job site. It lends uniformity and repetition to his jobs and gives a nice, neat professional appearance. When the job is ready to go, he simply bolts the panel to the wall and connects the piping already roughed in. What color does he paint his panels? Taco green, of course.

### Family and fun

Believe it not, life is not all about work for John. When not working, he enjoys hunting and fishing. He has his own boat for deep-water fishing.

"I love to take out people who have never been tuna fishing and watch their faces while fighting a big one," Perry says. "I will soon be starting to spend time with my two grandsons, ages 2 and 3, teaching them about hunting and fishing and the family business."

John's grandsons will be learning from one of the best.

In talking to John's clients as well as his industry partners, it was clear that he is a respected leader in his market. His customer's value his professionalism, honesty and superior craftsmanship. His industry partners regularly recommend John and his company to end-users, as they know he will not betray their referral and will represent their products well. This is why Advanced Comfort Systems will remain successful and busy in the years to come. ●

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