Residential HVAC



Installing heat pumps using decades-old rules of thumb keeps them from reaching their full potential.

Silver Buckshot, Not Silver Bullets: Rethinking Heat Pump Success in the HVAC Industry

NCI's David Richardson discusses the pitfalls of focusing narrowly on heat pumps as the sole solution, comparing it to aiming at the wrong target. Emphasizing learning from history, he calls for strategic targeting to unlock the full potential of heat pumps.

David Richardson

Key Highlights

- The HVAC industry has repeatedly targeted heat pumps without considering system performance, customer expectations, or installation quality.
- Success requires aiming at a broader target: delivering results that meet or exceed customer expectations through holistic system design and communication.
- Heat pumps are not silver bullets; success depends on integrating multiple factors like installation, system design, and customer needs.

For Olympic shooters, the difference between winning a gold or bronze medal is measured in millimeters. Because of this, these athletes have an extraordinary ability to focus on a single target and shut out anything that isn't a bullseye. No Olympic shooter is a better example of this extreme focus than American gold medalist Matt Emmons.

At the 2004 Olympic Games, Emmons won multiple events and shot dead-center bullseyes in the three-position event. However, he finished in eighth place. How can someone shoot so well and finish last? On his final shot, Emmons hit the wrong target, one lane over. He was looking at his target through a narrow lens, and, be-

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cause of this intense focus, he couldn't see anything else around him. Emmons' strongest asset suddenly became his worst enemy.

In our industry, I'm concerned we're repeating a similar form of tunnel vision called "Marketing Myopia." I worry that we've lost sight of the broader perspective of our business and those we serve. The focal point we've zeroed in on: heat pumps. Is it possible that the HVAC industry is following in the footsteps of Matt Emmons? Are we unintentionally aiming one lane over?

A Familiar Target From 1978

Heat pumps are not new. In fact, they were the HVAC target of choice in the late 1970s during an energy crisis. They were promoted as magic because they pulled heat out of the cold winter air to heat a home and worked as an air conditioner in the summer heat. This miracle equipment saved 30% to 60% on heating bills (depending on where you lived, of course). Heat pumps didn't require oil and gas, so the homeowner didn't have to worry about rising costs or fossil fuel scarcity. To get one, all you had to do was contact your "local dealer."

Technology has changed a lot since 1978. Heat pumps of old often failed to meet expectations, and it was usually not the equipment's fault. Poor duct systems and installation quality frequently doomed heat pump performance. They blew cold air, and resistance heat came on frequently, causing high utility bills — the opposite of what heat pump marketing materials promised. Because of this history, heat pumps still have a poor reputation among many contractors and homeowners.

For our industry to succeed at adopting heat pumps, they cannot be the target. Sounds counterintuitive, doesn't it? Our industry has repeatedly tried and failed over the past 50 years to make heat pumps the target. Any contractor could sell a heat pump, and they did. One of our biggest mistakes was taking the focus off the contractor and their strengths (or weaknesses). Instead, it became just about a piece of equipment that anyone could offer. Suddenly, all contractors looked the same, and energy efficiency was their banner of choice. We missed the bullseye. It's time to focus on the right targets as we move forward.

What is the Right Target?

So, if heat pumps aren't the right target, what is? It's the results we're supposed to get from them. These results are a much broader target that involves not only heat pumps, but everything connected to their performance. It's about meeting customer expectations. Any target has multiple rings to aim at. The key is to shoot at the *right* target. Some of these target rings include HVAC systems, customers' expectations, and the homes they live in. Unless our industry learns to aim at and hit those rings, we'll continue to miss the mark.

Start with your unique skills and abilities to design, sell, install, and verify heat pump systems. Ensure they perform in a way that exceeds customer expectations and delivers measurable results. Heat pumps today are built more precisely. They require the same precision in installation and commissioning to ensure they perform as expected. If you install a heat pump on an existing duct system without first testing those ducts to uncover potential defects, it's much harder, if not impossible, to meet customer expectations.

Your customers will decide if they're willing to invest their income in a heat pump system. They have their own reasons, and they probably are not the same as yours. It's your responsibility to find out why they want a heat pump. This means that your technical ability alone is not enough to hit the target. You must also learn to translate the technical side and communicate it to your customers at a level they can relate to.

This different viewpoint requires an alternative approach that looks beyond the heat pump alone and ensures its success working as part of an integrated system. It's an approach that considers not just equipment, but the duct system it is connected to, the skills needed to design, sell, and install that system, and the building it conditions. This approach is holistic instead of component-based and puts your customers in the bullseye.

Silver Buckshot, No Silver Bullet

To hit a target, you need a projectile. If you haven't guessed, heat pumps are not silver bullets. It takes more than heat pumps, passed off as complete solutions to energy and comfort problems, to succeed. Instead, our industry needs to think in terms of silver buckshot, as in shotgun shells. Shotgun shells act as multiple projectiles in a single package, all releasing together with a lot of force. In HVAC, the silver buckshot includes installation, design, communication, and verification.

Each of these traits misses the mark if used individually. However, they cover a broader area when used together. We know this but often forget to apply it, or don't know how. Unless an HVAC company makes these qualities part of its identity and culture, it will continue to look like every other HVAC contractor selling a heat pump.

The solution to this problem is to develop a process for high-performance heat pump retrofits. This process is the package that you pack your silver buckshot into. It creates differentiation and a specialized way to offer heat pumps that are distinctive to your company. When applied correctly, the process reduces heat pump problems from the past and paves the way to future success. In the following few articles, I'll define high-performance heat pump retrofits and offer tips for applying them within your company.

Learning From History

Matt Emmons had extraordinary skill and the best equipment money could buy. But in the end, he lost the three-position event because he aimed at the wrong target. Emmons' story at the 2004 games doesn't end there. He won a gold medal in another event using a borrowed rifle because someone had sabotaged his with a screwdriver. Emmons also met his future wife, a fellow shooter, who came to console him after the event in which he had aimed at the wrong target.

Matt Emmons didn't let the failure of a single event define him. Instead, he came away with a priceless learning experience. Our industry can do the same if we understand the dangers of marketing myopia and stop repeating the same mistakes. Otherwise, the benefits heat pumps offer may be delayed for another 50 years. Let's be sure we aim at and hit the correct targets so we can give heat pumps the opportunity they deserve.

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