

HIGH-PERFORMANCE HVAC TODAY™

If You Don't Measure, You're Just Guessing!™

Get Ready for
Summit 2019!



ALSO IN THIS ISSUE:

**Winning Communications
During the Sales Hand-off**

**Duct Traverse:
Using the Right Tools**

**ABCs of High-Performance
Contracting: Part 8**



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This balancing kit has two wireless transducers that measure the pressure drop across hydronic system valves and communicate to an Android™ handheld device via Bluetooth® wireless technology. The handheld's pre-loaded software allows users to read, record, and share data in the simplest way possible.

The wireless capability eliminates the need for cumbersome and unruly hoses. Its ergonomic design allows a single operator to monitor and balance a hydronic system in less time than traditional methods.

Unlike other hydronic manometers on the market, the 490W has built-in flow conversion capability, which shortens reporting time and eliminates human error during flow calculations.

The kit's overall efficiency, ergonomic design, and streamlined software make it the ideal solution for contractors looking to save time and money on a job.

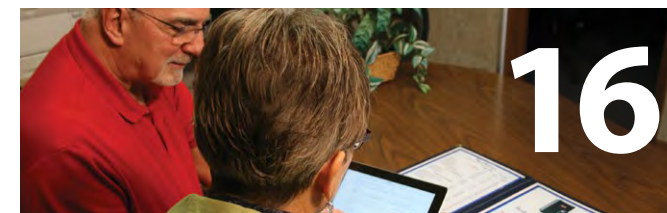
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MARCH 2019 VOLUME 3 NUMBER 3

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Prepare for High-Performance Sales

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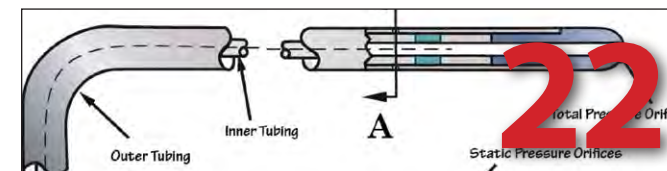


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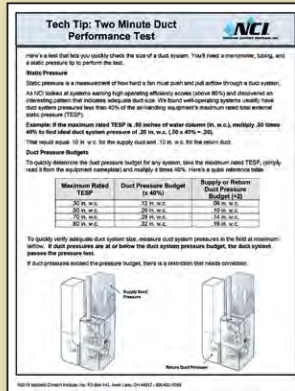
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FREE Monthly Download



Two-Minute Duct Performance Test is a step-by-step guide to doing fast static pressure tests in the field.

This data sheet highlights what static pressure is, what duct pressure budgets are, and provides the calculations for determining whether ductwork is sized adequately.

To use this information, you'll need a manometer, tubing, and static pressure tip to conduct the test.

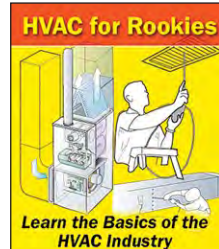
Just go to ncilink.com/TechTipDL, or use your phone with the QR Code below.

By registering for free on NCI's website, access this download and many more.



Online University

Featured this month is the **HVAC for Rookies** module of the Customer Service Training series.



This module is for those employees with little to no HVAC technical experience and will teach them the basics. It is part of short online courses that helps you with onboarding new employees, teaches rookies the basic fundamentals of HVAC systems, and how each major department in your company works together to achieve goals set by you.

The course covers the foundational structure of a HVAC company, HVAC basics, system performance and so much more.

Discover more at ncilink.com/ou0319



BLOG POSTS

THREE TIPS FOR MEASURING STATIC PRESSURE ON VARIABLE-SPEED FANS



Measuring static pressure on air handling equipment that has variable-speed fans can be a challenge to both new and experienced technicians. David Richardson shows that by addressing a few details, your readings will be consistent when you encounter this blower type. He provides three tips you can use the next time you measure static pressure on a variable-speed fan.

Read this blog post at ncilink.com/VSFStatics.

THE COMFORT REVOLUTION REVISITED



Back in 2005, Dominick Guarino wrote a column in another magazine that addressed the growing movement now known as High-Performance HVAC contracting. We believe it is still relevant today. Check it out and let us know if you agree.

Read this blog post at ncilink.com/Rev2.

There's an APP for That...



Are you looking for a great refrigerant charging and diagnostic HVAC app? **HVAC Buddy®** is for use when technicians are servicing equipment. In fact, using this app, along with your gauges and a thermometer, is a great way to diagnose and determine the right refrigerant charge.

Some features of the app include:

- Superheat for fixed capillary or subcooling for TXV/EXV
- Calculates targeted vs. actual subcooling
- Over 100 refrigerants including newer azeotropic blends
- Airflow / Delta-T / TEET Calculation
- Update all values with realtime output.

This app costs \$9.99 and is available at both the **Apple** (ncilink.com/HBud) and **Google** stores (ncilink.com/HBud2).



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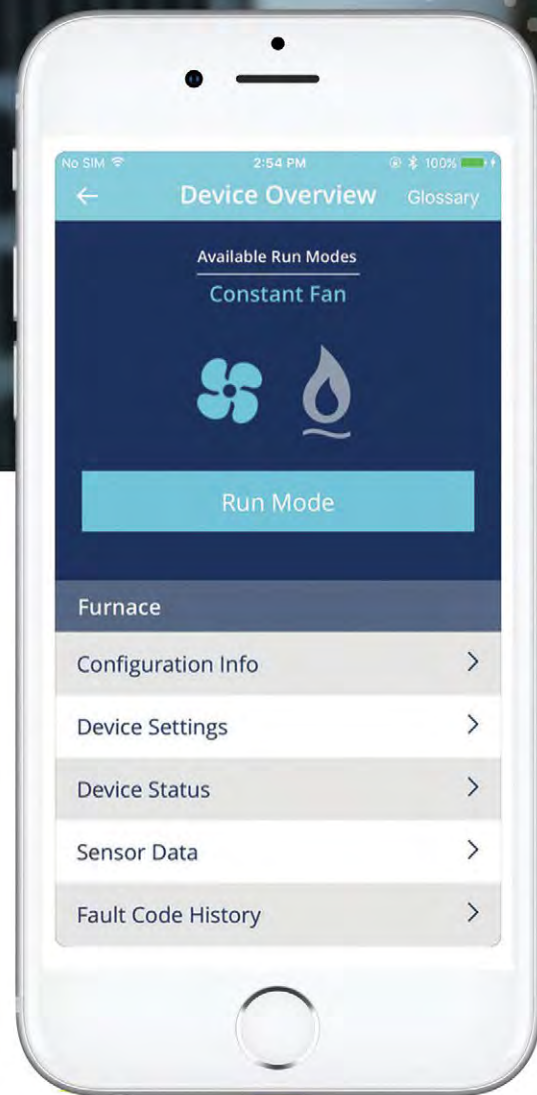
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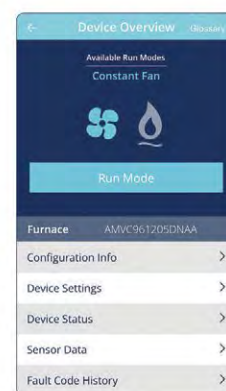


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Device Overview Screen

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TODAY'S WORD

By Mike Weil

Are You Actively Working on the Dream?

In February, the Women in HVACR (womenin-hvacr.org) association (WHVACR) announced the appointment of its new president for 2019, Danielle Putnam. Putnam, co-founder and president of The New Flat Rate (thenew-flatrate.com), steps into the WHVACR role as a strong advocate for the increase of women in the industry (which, by the way, is also the mission of the organization).

This is something near and dear to my heart on a number of levels.

First, I have been a strong advocate for opening the doors to this industry to more women and minorities for years. Besides all the articles I've written on the subject, 15 years ago I put my money where my mouth is and offered the newly founded organization a home for their annual meetings at the tradeshow I helped manage.

From that first tradeshow event in 2004 where WHVACR met with only 40 members, the organization today boasts 400 and continues growing.

I met Danielle during those years and found her to be a strong advocate for bringing "new blood" into the trades. She is a forward-thinking businessperson who not only helped her father start The New Flat Rate, but also previously worked as director of business development for a large digital service firm.

Besides working her day job, Danielle volunteers as a public speaker focusing on promoting careers in this industry. Furthermore, Putnam serves her community by teaching weekly classes for high school students on the importance of forming and maintaining healthy relationships and using those skills to get jobs, especially in the trades.

Her personal mission was a great fit for WHVACR, which she joined in 2012. She quickly joined their board of directors, and has been actively working on the dream of attracting more

people onto the HVAC career path.

"My mission in 2019 as president of WHVACR is to continue increasing member involvement to achieve the goal of attracting more people," she told me recently. She then explained her agenda.

"We're rolling out an Ambassador Program where HVACR professionals go to schools to talk about careers in the trades. This program will eventually be rolled out in all 50 states. My goal is to have ambassadors in 29 states by year's end."

In addition, she told me the organization provides five educational scholarships of \$2,000 each to help young people cover some of the costs of their HVACR education.

It's this kind of dedication that makes things happen. I know many other contractors and manufacturers that dedicate time and dollars toward encouraging young people to consider HVAC as a career. But this feels different. It feels like something this industry should get behind.

PUTTING YOUR MONEY WHERE YOUR MOUTH IS

If you are reading this, it's likely because you are involved, or want to be involved, in the Performance-Based Contracting™ approach. The impending technician shortage will definitely impact you if you cannot find and train the personnel you need to make High-Performance Contracting work in your company.

So my question and challenge is this: What are you doing about it? If the answer is, 'not as much as I should,' consider throwing your support behind organizations like WHVACR and/or learning about ways you can make a difference.

It will take an industrywide effort to move the needle. The activities of Danielle Putnam and WHVACR are major steps in the right direction. That's what I call, 'working on the dream.'



Mike Weil is editor-in-chief and director of communications and publications at National Comfort Institute, Inc. He can be reached at MikeW@ncihvac.com

2019 Events that Rock the High-Performance HVAC Industry

AHR Exposition Recap

In January the HVAC Industry got together for the 89th annual AHR Exposition in Atlanta, GA. It has been 18 years since the last Expo was held there and this year it occupied 30% more space than it did in 2000.

Another big change -- the number of sponsoring organizations. In 2019 more than 37 major industry organizations supported the Expo, along with more than 1800 exhibitors and 65,000 attendees.

Like every year at the expo, you can't help feeling the positive energy as the HVAC Industry gathers to talk about the future. Showcased were the latest technologies, equipment, and services.

This includes high attendance in all the educational sessions, crowds working the show floor, and the after-hours events where contractors, engineers, manufacturers, and distributors hobnob and lay the groundwork for the upcoming year.

A PERFORMANCE-BASED CONTRACTING APPROACH

Among the supporting and sponsoring organizations was National Comfort Institute (NCI), of Cleveland, OH. As an exhibitor, NCI focused on meeting HVAC residential and light commercial contractors walking the trade show and sharing with them training and tools that can change their business and their approach to providing customer comfort.

In addition, NCI trainers conducted four seminars that focused on the processes and technologies behind Performance-Based Contracting. Instructors from NCI included Rob Falke, Scott Fielder, and Ben Lipscomb, who was partnered with Peter Jacobs of Building Metrics.

The classes were as follows: .

- Airflow Testing Accuracy in the Field
- Quick Guide to Applying Fan and Pump Laws
- How Much Energy Can HVAC System Balancing Save?

- What it Takes to Get an Installed HVAC System to Operate at Equipment Rated Capacity.

In **Airflow Testing Accuracy in the Field**, Ben Lipscomb and Peter Jacobs discussed how advances in airflow instruments and technician certification have increased the accuracy of field airflow measurement in recent years.

They shared with the audience how test methods are simpler because of advanced instrument technology. Lipscomb said, "Technician skills are improving because of a steady rise in field airflow testing throughout the HVAC industry."

Scott Fielder's session, **Quick Guide to Applying Fan and Pump Laws**, discussed the ins and outs of applying pump and fan laws in the daily life of every HVAC technician in the field.

He says, "Understanding these laws allows test and balance, commissioning, and facilities maintenance professionals to better apply and solve problems daily."

How Much Energy Can HVAC System Balancing Save? That is the question Ben Lipscomb and Peter Jacobs asked attendees during their presentation of the same name. The answer -- plenty.

"Testing and balancing saves some energy," Lipscomb says, "and additional testing will help you better diagnose problems, find hidden system shortcom-



NCI Engineer Ben Lipscomb, P.E. during his session on Airflow Accuracy in the Field.



NCI Director of Business Training and Coaching David Holt manned the booth and talked with contractors about the "Data to Dollars" aspect of Performance-Based Contracting.

ings, and make customer repairs."

Rob Falke shared with attendees during his session on **What it Takes to Get an Installed HVAC System to Operate at Equipment-rated Capacity**, how popular opinion about the difficulties of optimizing system performance

is wrong. He explained that by developing your testing skills, "finding system defects may be easier than you think." He went on to show how this can be done.

Next year, the AHR Exposition will be in Orlando, FL, February 3-5, 2020. NCI, and National Balancing Council (NBC) will return as sponsoring organizations. Once again, they will provide a number of sessions as part of AHR's educational program. Be sure to mark your calendar.

2019 NCI Summit Is Nearly Here

The National Comfort Institute (NCI) High-Performance HVAC Summit is just a month away. There is still time to register and book your hotel, but you need to hurry -- space is at a premium and is

running out.

This year the event, which will be held in Orlando, FL on April 15-18, focuses on the High-Performance Sales and Delivery Cycle and features five Performance-Based Contractors who will lead the sessions.



Jennifer Bagley

Furthermore, NCI recently announced the keynote speaker will be **Jennifer Bagley**, CEO of CI Web Group, an HVAC Digital Marketing Agency in both the U.S. and Canada. She will talk about how to create a system within your company that produces clarity, focus, and the ability to execute.



Rob Falke teaches a full class about what it takes to get an installed HVAC system to operate at equipment-rated capacity during his session at AHR Expo 2019.

Schedule Onsite Training Today!



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In addition, this year's event features pre and post-summit training and activities as well as something new: **"Ask the Coaches."**

This one-hour session will follow the popular **Idea Meeting** at 5 pm on Tuesday, April 16. It will use a Q&A format and features five top HVAC industry coaches who will focus on customer-facing topics including sales, marketing, and customer service.

"This is a unique opportunity to interact directly with industry experts who can help make 2019 your best year ever," says NCI CEO Dominick Guarino.

The coaches include the following:

- **Brigham Dickenson**, President, Power-Selling Pros
- **Drew Cameron**, Owner, HVAC Sellutions
- **David Holt**, Director of Business

Mike Moore: 1955 to 2019

On February 3, 2019 the HVAC Industry lost one of its own with the passing of Michael Moore. He was 64 years old. He passed quietly surrounded by his family.

Mike was extremely well-known in the HVAC industry and spent more than 20 years with Lennox Industries where he played a pivotal role in the development, growth, and success of Lennox Learning Solutions. He served as its director for the last 15 years.

Prior to that he was Vice President of Training for Service Experts and International Service Leadership, both prior subsidiaries of Lennox International. He's credited with helping to develop many of the top contributors at Lennox and encouraging their progress along their career paths.



Training and Coaching, National Comfort Institute

- **Ben Middleton**, National Sales Training Manager, Goodman, Inc.
- **Tom Piscitelli**, President, TRUST Sales Training.

Visit GotoSummit.com to learn more about the sessions and special events happening at Summit 2019. Or turn to page 25 to see the Summit brochure. If You still have questions, call the NCI Customer Care line at 800-633-7058.

BACHARACH PCA 400 COMBUSTION ANALYZER

Bacharach's PCA® 400 offers everything technicians need to commission, tune, maintain, and certify any boiler.

Users have the option to save measured data in the unit as discreet tests, or stream it live via Bluetooth® communications to a PC or other smart hand-held device for compliance reporting.

Reports are easily and quickly generated to satisfy compliance requirements.



Interchangeable power options (rechargeable Li-Ion, 'AA' alkalines or line power) ensure the unit is always ready for use.

Probes and hoses come in a variety of lengths and materials to satisfy a wide range of applications, including NOx, and other requirements.

Automatic sensor protection not only guards against damage, but doubles their measurement range under high load conditions for increased flexibility.

Note: The PCA® 400 calculates CO₂ value based upon other measured values during the combustion process. It does not measure CO₂ directly.

For more information, visit ncilink.com/PCA400.

RINNAI I-SERIES RESIDENTIAL BOILER

Rinnai Corporation, manufacturer of tankless gas water heaters announced the launch of its new I-Series Boiler for the residential market at the AHR

Exposition in Atlanta this past January.

The I-Series can simultaneously use home heating and domestic hot water. That means, no interruptions if someone takes a shower at the same time the heat is running.

The technology also includes an innovative bypass servo valve, which enables precise control of the hot water temperature.

The I-Series Boiler is available in both combo and heat-only models and comes standard with multi-zone heating control. Rinnai says the new boiler will be available for ordering in the spring of 2019, well in advance of the start of the heating season.

To learn more, visit www.rinnai.us.

EMERSON SENSI PREDICT

From the time of installation, Sensi™ Predict allows contractors to take command of the homeowner's system and begin the transformation towards greater profitability.



By transitioning from a reactive business model to a proactive sensor system that connects the contractor to ongoing home performance, the contractor ensures the probability of higher revenue per truck roll.

Sensi™ Predict monitors 24/7/365. By installing 10 smart Wi-Fi sensors on the home furnace and air conditioner, homeowners will have peace of mind in knowing their system is working efficiently.

In addition to a monthly performance report emailed to both the contractor and the homeowner, a real-time alert is sent if a warning is detected.

The new Sensi™ Predict is currently being rolled out to select markets and will continue to expand in 2019.

For more information, visit SensiPredict.com.

ROBERTSHAW UNIVERSAL IGNITOR

The IgnitorPro™ universal ignitor was showcased during the AHR Expo in Atlanta, GA in January.

It is designed to deliver dependable ignition in heating systems of every description: furnaces, boilers, rooftop heaters, infrared burners, unit heaters, water heaters, and many other types of HVAC equipment.

Robertshaw offers two universal ignitors:

- Model 41-802N features state-of-the-art silicon nitride technology for the best durability and a flat blade heating element for best heating dissipation.
- Model 41-803 features high density silicon carbide and a flat blade heating element for good heat dissipation.

These ignitors can replace more than 150 brands of ignitors. For more information, go to ncilink.com/Ignitors.

Introducing NCI's First High Performance Mobile App:

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LITE

NCI's new AirMaxx Lite™ app features easy-to-use data entry and easy-to-display reports.

Get started on the path to High-Performance HVAC™ today!

Download this free app (available for both Android and iOS phones) onto your phone or tablet, and immediately start using it to display an airflow 'grade' for your customers.



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Masterworks Mechanical: Focused on Performance

Nearly six years ago, National Comfort Institute (NCI) profiled this Craig, CO-based HVAC company in its member newsletter. In that profile, author Steve Vannoy wrote, “Blend one-part staunch commitment to outstanding customer service, one part enthusiasm for giving back to the community, and one part dedication to creating a quality workplace and you should have a winning formula for business success. The company, which was started in 1988 by Dave DeRose, has consistently applied this formula.”

At the time of that article, Masterworks had 12 full-time employees, and was a successful player in the area’s service and installation arena.

CHANGES

Fast forward to 2019. Masterworks now employs 27 co-workers, Dave DeRose successfully sold the company to one of his top lieutenants, and the company is solidly focused on the Performance-Based Contracting™ method of doing business.

That lieutenant is Victor Updike. Victor joined Masterworks in 2008. During those early days he was involved in a serious accident that kept him out of the field for six months or more. While recuperating, he decided to focus on training, especially NCI training, Summit, and a few other things. That is where he got hooked on the idea of HVAC system performance. Masterworks became a mem-

ber of NCI in 2009.

His wife Amy, who had a career in the medical industry, decided to join Masterworks, first as a dispatcher, then as office manager and more. She learned as many aspects of managing the company as she could and became indispensable to DeRose.

The fact is, both Updikes were indispensable members of DeRose’s team. So, when he decided it was time to push the button on retirement, David approached Vic and Amy about buying the company. They agreed.

The sale was finalized in 2015 and for the past three years, with the Updikes at the helm, Masterworks has enjoyed solid growth and is more focused on High-Performance



Victor and Amy Updike bought Masterworks in 2015.

contracting than ever before.

“David DeRose built an amazing business,” Vic Updike says. “He created a solid customer base and the premise that he operated on was so valid to me that I could see where we could take that and grow it.”

SOME STATISTICS

Craig, Colorado is in mountain country. The area has seasonal temperatures ranging from -30F in January to 85F in July. It’s not a town for the faint-hearted to be sure. Still, the needs of the population for heating and air conditioning are demanding, and Masterworks Mechanical has made it their mission to provide outstanding service to their client base.

The company serves both residential and commercial markets, which includes forced air and hydronic air conditioning, plumbing, service-repair-installation, new construction, as well as commercial refrigeration.

Updike says the mission is to provide the highest quality service and experience through top quality training and benchmarking improvements.

SUCCESS BASED ON TRAINING

Over the years, all the field staff – plumbers, HVAC technicians, as well as apprentices/helpers have been certified in combustion and CO (carbon monoxide) safety. The company conducts weekly training in-house on all aspects of the products and services Masterworks offers.

“We average around 70-80% attendance by our techs

and apprentices. Attendance is voluntary. Plus, we bring in outside training. Besides combustion analysis and CO certifications, installers and service techs are certified in system performance and residential and commercial air balancing.”

Grand Junction, Ferguson in Steamboat (yes that is a real city), and Winn Supply (also in Steamboat). These partners arrange to have manufacturer reps training on the various products that Masterworks carries and uses. Sometimes that training is at the Masterworks facility, other times it is at the distributor location. “The secret is that you cannot do this alone,” he says. If you want to be the best at what you do, you need help. So, look to partner with the best firms. And don’t forget about your fellow contractors. Networking is very important to our learning and training.”

IMPLEMENTING PERFORMANCE

According to Victor Updike, his focus on Performance-Based Contracting centers around combustion analy-

“MASTERWORKS AND OTHER HVAC COMPANIES ARE LIKE COLLEGE AND HIGH SCHOOL FOOTBALL TEAMS – BOTH ARE PLAYING FOOTBALL BUT NOT ON THE SAME FIELD.”

TRAINING IS NOT A SOLITARY AFFAIR

“I think it’s important how pivotal our involvement with NCI and its training programs have been for Masterworks,” he says. “It is amazing to me how many members don’t even realize the effect of the coaching and business training that comes with NCI.”

But training is not a solitary affair and Masterworks also works closely with wholesalers who Updike says have an “intense commitment to our training.”

Their three main distributor partners include Johnstone Supply in

sis. Over the last three years especially, he says this focus has helped Masterworks grow because it enabled them to add new products and expand into new markets.

“The first hurdle in implementing combustion analysis is committing yourself to the ‘why you do what you do,’” Updike says. “That began with David DeRose. It really takes an effort to answer that question.

“Once you do and place it into your culture, your techs won’t hesitate to answer unexpected customer questions or concerns. They also can make decisions based on testing and diag-



The Masterworks Mechanical team takes a break from their busy High-Performance day to celebrate holidays and success.



Ken Scott (right) and Jeffery Peck participate in a typical in-house training session conducted by Masterworks Mechanical weekly.

nosis. Our field team cannot do this if they don't understand why Masterworks operates this way when none of the competition does."

MEASUREMENT: THE SECRET SAUCE

Updike explains that they built their combustion program using UEI analyzers. He says that as the technology advanced (as well as the training) they switched to Bacharach instruments.

"One reason for this change: the test saving feature included in the tool saves into our dispatch program and lets us maintain historic data easier," he says.

In addition, Masterworks technicians use Testo tools for air conditioning and refrigeration testing.

"The capabilities of such instruments allow us to perform service by measuring not guessing. To be honest, we've found through our implementation process that any requirement we put on our technicians that is cumbersome or time consuming, has a much lower success rate.

"The latest tools and instruments contribute to the ease of conducting measurements, and have enabled us to collect all the necessary data on each start-up and service call. That is really the secret sauce to our performance success."

He points out that at first, the field service and installation crews live off the great feelings from life-saving success stories that happen on the job. He says because of combustion analysis, they can find and resolve CO issues before a serious negative event can happen.

"CO saves happen fast and in a surprising amount," Updike adds.

"Lastly" he says, "you will cause some unintended results. For example, a realtor hires you for a furnace inspection before a sale. With your commitment to combustion testing you will inevitably condemn equipment – a headache for the realtor."

"A competitor most likely won't identify these issues, so we may lose the job. We can overcome this through better communications – using easy-to-understand verbiage. This is the 'why' of your commitment to performance. Having the "why" locked down, helps you keep your commitment."

The Masterworks office crew includes (left to right) Amy Updike, Krystle Bohrer, Tkay Hall, and Taylor Peck.

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MASTERWORKS' PERFORMANCE CULTURE

Though he says implementation is an ongoing process, Victor Updike says it is well-established in the way they conduct business now. For example, they include air and system upgrades into every furnace replacement



Jason Blackwell pulling inventory for a job.

quote. He says it enables him to talk about the importance of maintenance to make sure that not only the equipment works with their design, but the ductwork as well.

"And I can back up what I'm saying," he continues. "How? Because we measure everything. Before and after every job. We have the numbers to show that what we did worked."

The result: Masterworks offers products and services nobody can compete with.

Updike says the key to their successful delivery of services and care of customers is the team.

"The fact is," he explains, "our team has an untrainable dedication to Masterworks' image and our customers' well-being. It comes from the culture, the family approach to management, and empowerment.

"We believe this to be our primary focus," Updike adds.

GROWTH THROUGH IMPLEMENTATION

Over the years they've worked hard on implementing High-Performance Contracting into their company. The team has been able to triple their historic annual gross revenue. Part of the reason: being able to introduce new

services including:

- Expanding their new construction market area
- Creating a heat exchanger integrity test using combustion analyzers to identify breeches. This has increased their replacement business by 75%
- Conducting a combustion analysis on every heating, water heater service, and replacement call
- Installing an NCI Carbon Monoxide monitor on every furnace/boiler replacement
- Entering the water treatment business – installation and service
- Including duct rehabilitation into

learning. If you don't spend the time to continue learning every day, you will never be successful in this trade.'

"That shook me to my core," Updike says. "It is what led me to question everything and eventually got me involved with NCI. In my opinion, the High-Performance approach, as defined by NCI, is where this entire trade is heading.

"It is a never-ending cycle and that is a good thing. It means, as you learn new facts and methods, you can go back to your customers and admit you know more now and can help them make their homes and business even



Braeden Barnes cutting sheet metal in the fabrication shop.

pricing for every furnace replacement quote

● Creating an annual residential maintenance agreement program.

Maintenance agreement sales is a new market for Masterworks. Previously they only performed commercial maintenance.

A NEVER-ENDING CYCLE

Updike likes to tell this story about when he graduated from tech school. His instructor told him that success isn't based on what work you do, how well you do it, or who knows it. He said, 'We won't be able to tell if you are successful until you have had a little time to show us that you continue

more comfortable and energy efficient. You can do it with confidence."

Vic also says part of the performance culture is to help others interested in implementing it into their companies.

"We invite anyone struggling with their implementation process, or wanting a guy-on-the-ground view on how to drive your culture to Combustion Testing, to contact us anytime."

As Masterworks enters their 31st year in business, **High-Performance HVAC Today** magazine congratulates Vic and his team on their accomplishments and willingness to help others. This is the 'why' of our decision to re-focus our **March 2019 Contractor Spotlight** on them.

The ABCs of High-Performance HVAC Contracting: **PART 8**

High-Performance Selling: Prepare For The Call



High-Performance Selling in the HVAC industry is actually more of a buying process. When done right, the customer will typically make the buying decision long before a formal proposal is ever written or presented.

While this series couldn't practically include every detail of dealing with every sales situation, it should give you a good overview of the process. With some good training on performance testing, coupled with the steps outlined here, you should be able to hit the ground running.

The foundation of Performance-Based Selling is an educational buying process that uses basic system testing to help identify and diagnose issues that impact comfort, indoor air quality, and energy efficiency. The buying sequence typically includes three key steps:

- Interview the customer to under-

stand their comfort and energy concerns, their specific needs, and their short and long-term objectives

- Test and analyze the customer's comfort system performance to identify those areas that need improvement
- Prescribe options that address the customer's needs.

The High-Performance Sales process can be further broken down into six basic steps – once you're in the home. The order of these steps may vary based on the specific situation and customer needs, but each are essential. Next month, in Part 9 of this Series, we will walk through each of the six steps of this process.

But first, it's important to identify the type of lead and how it was generated, so you can tailor your approach both before the call and while in the customer's home.

CUSTOMIZING THE PROCESS

Before you engage a customer, it's important to identify how the lead came to your organization. With this information you can tailor the visit to match the lead type. Most leads will be generated from one of the following three events:

1. **Performance testing** during a service or maintenance call
2. **Customer calls for help** to solve a comfort, energy efficiency, or indoor air quality issue
3. **Customer contacts you for replacement quote** – lead generated from your marketing efforts.

Let's look at each of these lead sources and how they impact your sales approach:

SERVICE/MAINTENANCE LEAD

This is one of the best types of leads since it is generated by your technician while testing a sys-

tem during a service or maintenance call. You have virtually no competition in this instance.

Key symptoms like high static pressures at the equipment and across components, such as coils and filters, should trigger a conversation with the customer and a subsequent visit by a comfort advisor.

If you have technicians who sell, they would take steps to further diagnose and offer solutions.

There are some key signals to look for regarding customer comfort or energy efficiency complaints or issues.

Oftentimes the lead is initially triggered by a combination of aging equipment not worth repairing, and longstanding issues with the system.

Once in "solutions mode," it's good to begin testing the system as soon as possible.

The technician or comfort advisor should continue testing, asking lots of questions, and educating the customer every step of the way. When done properly, the customer will want to know what you can do to improve their system.

During your busy season, this type of lead is a great opportunity for following up once you slow down. Besides helping to level your cash flow, these off-season installations and renovations make working in attics and crawl spaces much more bearable for your installation crews.

On this type of sales call, bring your test instruments into the home as you need them. While it might be easier to bring in all your tools and instruments, it can overwhelm your customer and backfire, possibly jeopardizing the sale.



CUSTOMERS SEEKING SOLUTIONS

When a customer calls you because they have comfort issues, indoor air quality problems, or high utility bills, they are giving you permission to thoroughly test their system.

In this case, bring all your diagnostic tools into the home. It puts on the type of show they are looking for. They expect and want you to test and diagnose their comfort system, and propose solutions to their issues.

The more you educate and empower customers to be involved in designing the solution, the more buy-in you will get. This is especially important with a fairly involved solution requiring significant financial investment. One example of this could be a complete air distribution renovation that includes duct replacement, new runs, new registers and grilles, and so on.

These sales can be very profitable and rewarding. If the customer lives in a development of similar homes, chances are their neighbors have similar problems. Asking for referrals, coupled with some neighborhood targeted marketing, could yield huge results. A full test-out with documentation is extremely important on these type of leads.

Remember, the customer sought you out to solve one or more problem, and they will want proof that you delivered.

EQUIPMENT REPLACEMENT LEAD

In this instance it's important to go slow. It's best to ease the customer into letting you perform initial testing. You will often uncover longstanding problems they've probably learned to live with and thought nothing could be done about it.


So start slow, first testing static pressures and asking lots of questions. As the customer's comfort level increases about the newly introduced idea of testing, you can bring in an airflow hood and other instruments.

The key is to gradually educate the customer, while asking permission to perform testing each step of the way.

For example, it's important to let them know that you will need to install test ports to check the static pressures at the equipment. The last thing you want is to upset the customer by drilling holes into their equipment when all they wanted was an equipment replacement quote.

Before drilling the test ports, explain they should have been installed when the original equipment was put in, but unfortunately most contractors don't understand the importance of testing equipment. You could also mention that before you received specialized training, you too just followed typical industry practices.

If you are the second or third salesperson in the home, you can use this opportunity to question why the others didn't install test ports. After all, if you don't measure, you're just guessing!

Next month, in Part 9, we will walk through the six steps of a typical sales call and how each is influenced by the lead types discussed above. 

Catch up on all the installments of this series:

Part 1: What is High-Performance HVAC and Why Do It? ncilink.com/ABCs-1

Part 2: Is It the Right Fit for Your Company? ncilink.com/ABCs-2

Part 3: Five Steps for Becoming A Performance-Based Contractor. ncilink.com/ABCs-3

Part 4: Five More Steps to Becoming a Performance-Based Contractor. ncilink.com/ABCs-4

Part 5: Your Investment in Performance. ncilink.com/ABCs-5

Part 6: The Five Keys to Quality Training. ncilink.com/ABCs-6

Part 7: The Right Tools for the Job. ncilink.com/ABCs-7



Cutting-edge Training from the Industry leader in Performance-Based Contracting™

Think you know airflow? Think you know carbon monoxide safety? Think you know how to solve your customer's comfort issues? Be sure. Don't guess. Find the training and expertise you need from the National Comfort Institute (NCI). Only at NCI will you find certification courses like Duct System Optimization and Combustion & Carbon Monoxide Safety, taught by leaders and innovators in the HVAC industry. Find out why NCI says "If You Don't Measure, You're Just Guessing!™" Visit the link below or call 800-633-7058 to find classes near you.

Upcoming 2019 NCI Training Schedule

Airflow Testing & Diagnostics and Refrigerant-Side Performance

Apr 2-4: Los Alamitos, CA

Airflow Testing & Diagnostics

Apr 2: Los Alamitos, CA*

Apr 18: Orlando, FL

Refrigerant-Side Performance Certification Program

Apr 3-4: Los Alamitos, CA*

Residential HVAC System Performance & Air Balancing Certification Program

Mar 19-21: New Hudson, MI

Mar 26-28: Somerville, MA

Mar 26-28: Los Alamitos, CA*

Apr 2-4: Carrollton, TX

Apr 30- May 2: Centennial, CO

Duct System Optimization & Residential Air Balancing Certification Program

Mar 11-13: Cincinnati, OH

Mar 26-28: Atlanta, GA

Apr 2-4: Minneapolis, MN

Apr 2-4: Baltimore, MD

Apr 9-11: Earth City, MO

Apr 9-11: Los Alamitos, CA*

Apr 9-11: Spirit Lake, IA

Apr 23-25: Jacksonville, FL

Apr 30- May 2: Cleveland, OH

Commercial Air Balancing Certification Program

Mar 19-21: Tulare, CA*

Apr 16-18: Los Alamitos, CA*

Commercial System Performance Certification Program

Apr 23-24: Tulare, CA*

Apr 30- May 1: Richmond, VA

Combustion Performance & Carbon Monoxide Safety Certification Program

Mar 5-7: Philadelphia, PA

Mar 19-21: Richmond, VA

Apr 9-11: Pittsburgh, PA

Apr 18: Orlando, FL

Performance-Based Selling Bootcamp

Apr 30 - May 2: Los Alamitos, CA*

National Balancing Council Commercial Balancing with Certification

Mar 25-29: Cleveland, OH

Optimize Economizer Performance with Certification

Apr 25: Tulare, CA*



* Subsidized NCI training offered by Southern California Edison

Visit NCIlink.com/ClassSchedule to view the latest schedule of NCI Training events

Communication + Organization = Success and Profit

Communication and organization are important to any company's success. Without these qualities, jobs often don't work out well and can end up going wrong due to making assumptions.

Duct renovations can have a lot of complications if you don't communicate the scope of work up front and organize the materials. Multiple supply house runs and needless duct repairs often occur when we don't communicate the right way.

Advanced duct renovations often require more than pictures and quick descriptions. They require coordination and being onsite to show and explain needed repairs.

This shows your installation team and customer that we appreciate them, and opens the door to addressing any questions or concerns upfront. Everyone is on the same page.

MISTAKES HAPPEN

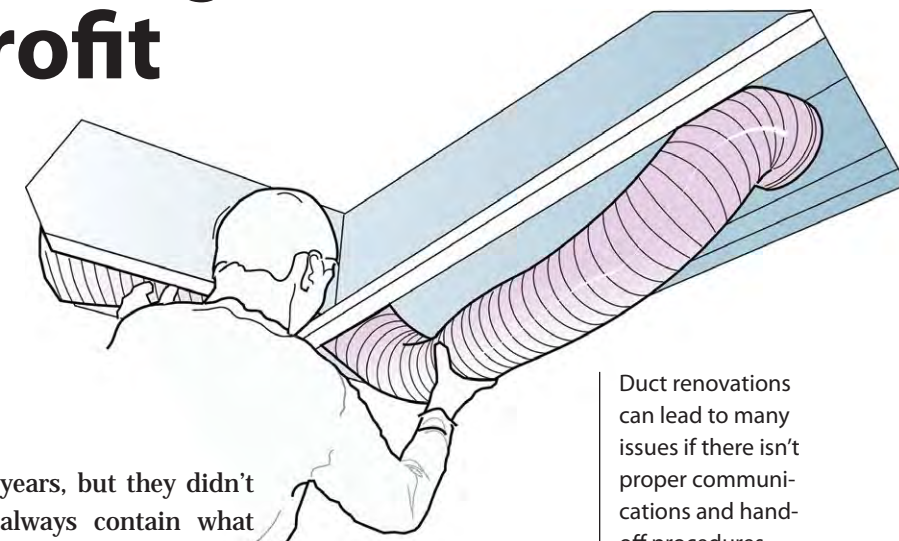
For example, we had one duct renovation where crucial duct repairs were missed, and we made assumptions that led us to not delivering what was promised. That put us in a tough spot since the customer expected the solution we sold them, not what we delivered.

Mistakes happen – how we address them is a choice each of us must make. In this situation, we made repairs the best we could to get close to the results we promised. This was costly in time and material. We knew something had to change so this wouldn't happen again.

In other words, we had to confront some brutal facts. By doing so, this experience proved to be a game changer for our company.

COMMUNICATION

The first action we took was to prepare **job packets** consistently. We've had job packets for



Duct renovations can lead to many issues if there isn't proper communications and hand-off procedures between the salesperson and the installer.

years, but they didn't always contain what installers needed. We had to define what would go into each packet and keep it in a consistent format so that everyone knew what to expect.

The job packet is like a football playbook that keeps all the players on the same page. The salesperson is the quarterback and must make decisions so the team can make the right play to get to a first down.

A properly designed and prepared job packet leaves no room for misunderstanding. Here is a list of items we now include in all our job packets:

- Equipment information
- Copy of the customer proposal
- List of detailed repairs that were sold
- Digital photos of problem areas
- Copy of Air Distribution Worksheet
- Floor plan
- Duct schematic
- Field drawings
- Combustion Analysis Reports
- System Commissioning Report
- Air Upgrade Report
- Copy of Manual J – Short Form.

Next, each job requires a **pre-meeting**. The day before the job, we gather the team together and go over what needs to be done. Think of this



To improve communication, GV's went to a consistent format for their job packets to assure installation teams have all the right information in one location.

like the quarterback huddling with his receivers. They leave the huddle knowing what route to run and who is fulfilling each role. There is no confusion on who is doing what.

The final communication protocol we established was **reviewing the job** to ensure it is going as planned. This review happens at the end of each day. We go over that day's work and if issues come up we decide, as a group, how to correct things, instead of letting them go or making assumptions.

To assure our systems perform as sold, the installation teams verify their work. If something is missed, they see it and take care of it before the customer knows.

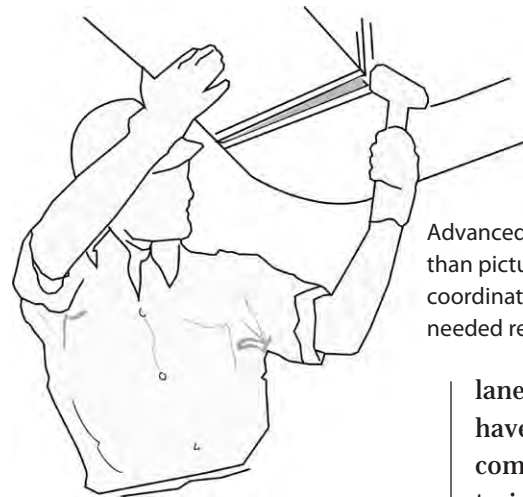
One great result of doing this is our installers get totally stoked to see the awesome job they did. This completely changes everything. They now **own** the results instead of being told what they were.

ORGANIZATION

To address our brutal facts, one of our first actions was to provide installers with **consistent supplies**. We put together furnace bins so the proper materials for each furnace installation are already pulled and accounted for. In addition to these bins, we also



Stock contained inside one of GV Heating's standardized installation bin.



Advanced duct renovations often require more than pictures and quick descriptions. They require coordination and being onsite to show and explain needed repairs.

lane based on the job number. I don't have to do any extra work, all I do is communicate the proper job and materials to our distributor.

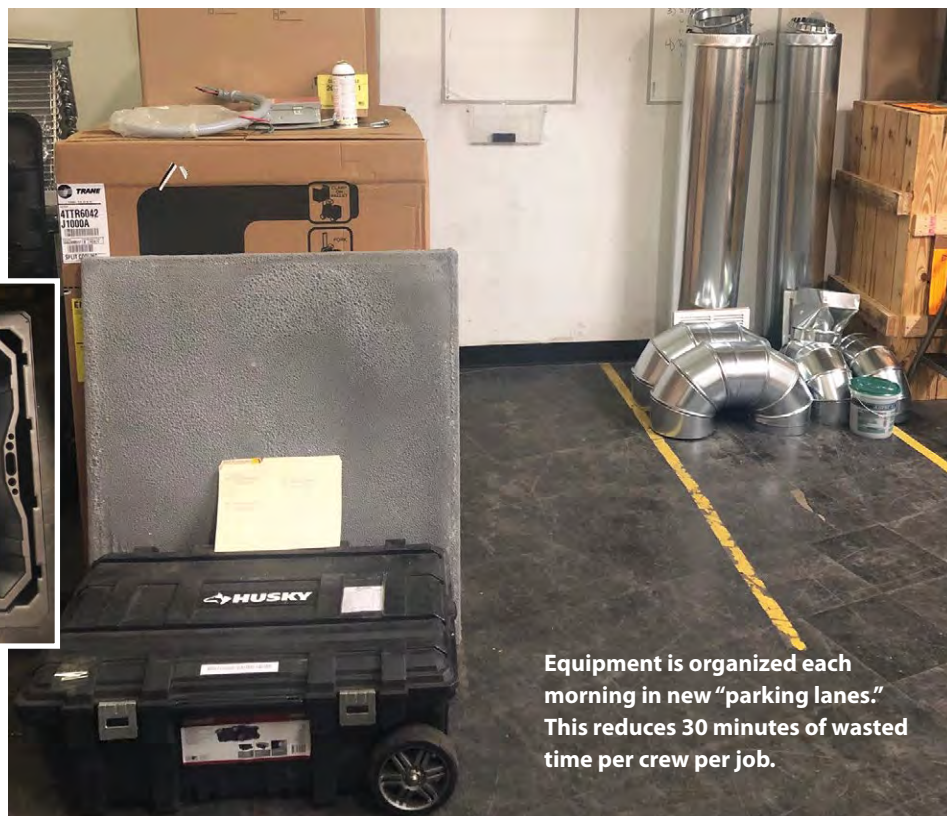
The last action we took was to prepare **duct renovation kits**. The kits address the most frequent return and supply repairs we make in our market. They are:

- 8" Basement Return Kit
- 10" Basement Return Kit
- Supply Plenum Kit
- Return Air Drop Elbow Kit.

With these kits, we have all the materials pulled and ready to go if the salesperson notes that renovation is needed.

THE RESULTS : SUCCESS AND PROFIT

Since we addressed the brutal facts behind our duct renovation issues, our test-out numbers have improved.



Equipment is organized each morning in new "parking lanes." This reduces 30 minutes of wasted time per crew per job.

While it was uncomfortable at the time, we've grown from the experience. We had a choice to ignore the problem or confront it.

I'm happy to say we took it on and made our duct renovations more successful and profitable.

As a result of these changes, we are now finishing jobs on time or early, with our installers never needing to make runs to distributors for supplies.

Our installers are now spiffed for their performance as we measure and verify. They are compensated just like our service technicians and rewarded for awesome results. Last year we had 156 hours of supply house time before we made these changes.

Once we improved our communication and organization, these numbers

Meet Dawn Mroczek at NCI Summit 2019

High-Performance HVAC Summit 2019 is happening April 15-18 in Orlando, FL. Dawn Vickers-Mroczek is one of five Performance-Based Contractors™ presenting how they bring High-Performance into their companies and their marketplace. She is a comfort consultant for GV's Heating and Cooling, Inc. in Glenview, IL.

Dawn will share how to create a well-oiled process for handing sold jobs off to installers. This process not only improves installation quality, but can make it more profitable as well.

Come meet Dawn and network with your peers in Orlando. Learn more about the Summit 2019 program at GoToSummit.com.

After Summit, stick around for our Post Show Training classes. Go to ncilink.com/PostShow for details.

Register today. Questions? No problem. Call 800-633-1850 and talk to your customer care representative.



dropped by 80%. This has helped us achieve our goal of increased duct renovation success and profit.

Small changes and adjustments in our operations yielded big results that

we never would have known about unless we had that original problem.

Remember, mistakes happen – how we address them is a choice each of us must make. NCI

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Duct Traverse: The Right Tool for the Right Job

Performing a duct traverse is a fundamental skill that air balancers need to master. It's also a key skill for HVAC technicians who want to measure and improve system performance for their customers. With the different instruments available for performing a traverse, it can be confusing to know when to use which instrument.

If you're just starting out with duct traverses, you might be struggling to decide which instrument to buy. This in-depth article covers instrument selection for duct traverses and provides you with clear recommendations on what to buy first, and what to use when.

THE PITOT TUBE

The classic tool for performing a traverse is the Pitot-static tube (or simply Pitot tube for short) with an inclined or u-tube fluid-filled manometer. The Pitot tube was invented in 1732 by French hydraulic engineer Henri Pitot, who originally developed the concept to measure waterflow in the Seine river.

Henri's original Pitot tube had some design issues that limited its practical use and accuracy.

These and other limitations persisted for more than 120 years, relegating the Pitot tube to "little more than a scientific toy" until another French engineer, Henry Darcy, systematically improved its design.

Because of the extent of those improvements, some have proposed calling the device a "Pitot-Darcy" tube. Both Pitot and Darcy used this instrument for measuring liquid flows, but it is most often used to measure airflow.

Today, we enjoy further advancements in the design of the Pitot tube as well as the development of accurate digital manometers which make them among the most accurate tools to measure airflow inside ducts. They are also convenient and robust enough to use in the field.

The Pitot tube does have its limitations. ASHRAE 111 states that a Pitot-static tube traverse is not practical below a 600 fpm (feet per minute) velocity, and manufacturers of digital manometers intended for the purpose generally don't recommend using Pitot tubes below 1,000 fpm.

With a typical high-end "field-grade" digital manometer, accuracy at 600 fpm is about +/-10% and accuracy at 1,000 fpm is +/-4%. This puts the Pitot-tube out of range for most residential and light commercial airflow measurement applications, where velocities are almost always below 1,000 fpm, and are often below 600 fpm.

An alternative to the standard bent-tube Pitot is a "straight Pitot" or "airfoil" type probe, which doesn't have the 90-degree bend and is easier to insert into ducts through pressure ports.

These types of probes also have pressure orifices oriented directly into and directly away from the airflow. This amplifies the pressure signal, so you can use them with slightly lower airflows than a standard Pitot tube.



Figure 2: Straight Pitot and Standard Pitot Tubes.

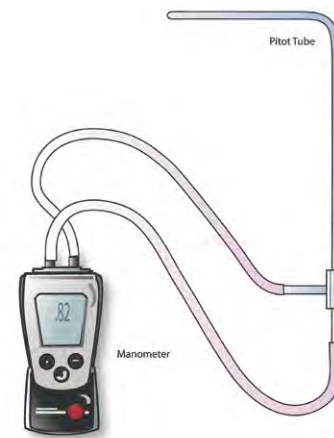


Figure 3: A digital manometer connected with flexible tubing to a Pitot tube. This is a good choice for air velocities over 1,000 fpm. Generally these velocities are found in high-volume commercial systems.

Be aware that the same effect limits the upper velocity ranges that can be measured depending on your manometer selection. Specific equations supplied by the manufacturer must be used with straight Pitot or airfoil probes.

DIGITAL MANOMETERS FOR PITOT TUBE MEASUREMENTS

When you select a digital manometer for Pitot tube measurements, it is extremely important to pay attention to the instrument's accuracy and range specifications.

Digital manometers are often specified with accuracy as a percent of the full scale of the instrument. Because of this, an instrument with a range of 0 to 1 in. w.c. (inches of water column) will be far more accurate for typical HVAC

airflows than an instrument with the same accuracy and a range of 0 to 20 in. w.c. A manometer with a 0 to 1 in. w.c. range will work well up to about 4,000 fpm. These are often marketed as "micromanometers."

That said, there are some instruments on the market that have a wider range (e.g. -15 to 15 in. w.c.) and specify accuracy as a percentage of the reading with an additional absolute accuracy term to account for the fact that accuracy is lower at lower flow rates. Some of these instruments have accuracy throughout the measurement range that's comparable to a quality 0 to 1 in. w.c. manometer.

Sometimes manometers specifically intended or marketed for air velocity measurement specify percent accuracy at a specific velocity.

Remember, the velocity used is often much higher than typical HVAC duct velocities, and accuracy deteriorates as velocities decrease.

THE THERMAL "HOT-WIRE" ANEMOMETER

A "Hot-Wire" or Thermal Anemometer measures electrical resistance through a heated element. The resistance changes depending on airflow over the element.

Thermal anemometers have come a long way in terms of their accuracy, measurement range, and robustness for use in the field.

For example, ASHRAE 111 cites accuracies of +/-10% and maximum ranges of 600 fpm. However, modern instruments claim accuracy as low as +/-3% with a measurement range up to 6,000 fpm.

With these specifications, it makes them the clear choice if most of your measurements will be in velocities less than 1,000 fpm.

If you regularly test systems with velocities above 1,000 fpm, a thermal anemometer can still be a good choice for convenience. Most thermal anemometers also measure temperature, and some higher-end models also incorporate relative humidity and barometric pressure sensors.

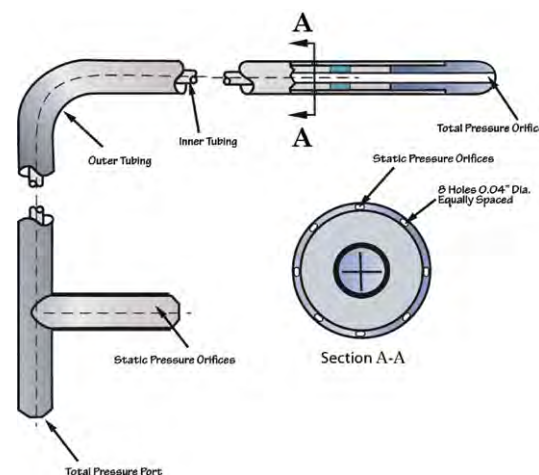


Figure 4: Two different thermal anemometers

These sensors turn the instrument into a multi-function tool, but more importantly they allow the instrument to automatically compensate for air density and display your measurement in either actual or standard CFM. That's something you must do manually with a Pitot tube measurement.

One aspect to be aware of when us-

Figure 1: A modern Pitot-static tube design for airflow measurements. An inner tube with an orifice that faces into the flow measures total pressure. Orifices arranged around an outer tube are oriented perpendicular to flow to measure static pressure. Total Pressure minus Static Pressure equals Velocity Pressure, which can be converted to air velocity.



Probe Type	Minimum Air Velocity for +/- 10% Accuracy	Minimum Air Velocity for +/- 4% Accuracy	Upper Limit of Measurement Velocity with 0 to 1 in. w.c. Manometer
Standard Pitot	600 fpm	1000 fpm	4000 fpm
Straight Pitot	500 fpm	800 fpm	3200 fpm

Table 1: Minimum velocities for 10% and 4% accuracy for Standard vs. Straight Pitot tubes with a typical digital manometer (+/-0.5% of full scale; 0 to 1 in.-w.c. range)

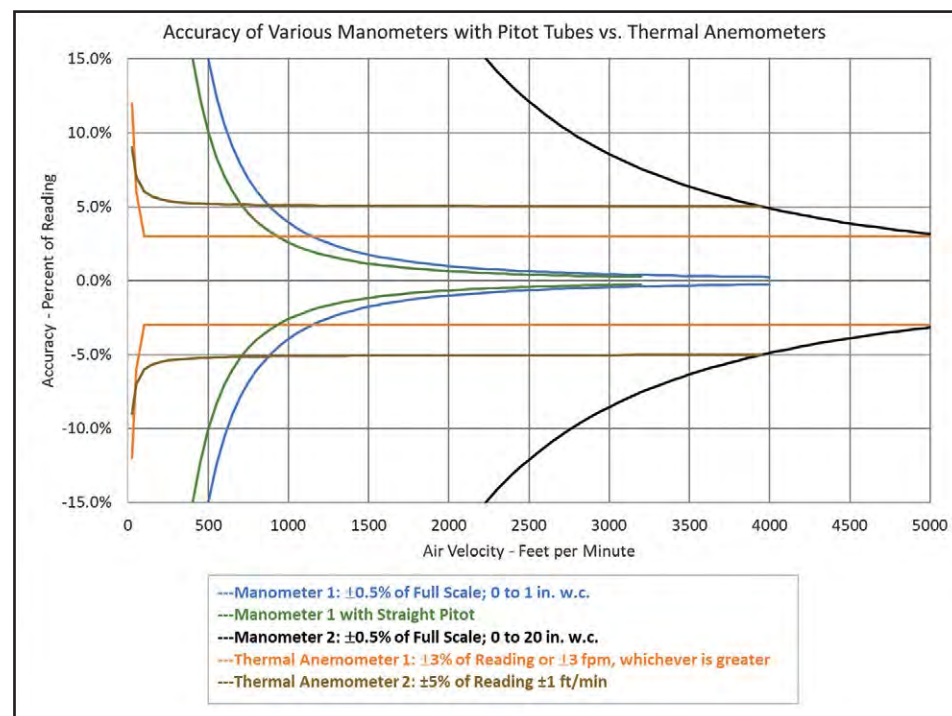


Figure 5: Accuracy of several manometers with Pitot tube and Thermal Anemometer options. Thermal anemometers are generally best below about 1,200 fpm. Above 1,200 fpm a Pitot tube with an appropriate digital manometer is more accurate, but thermal anemometers have some attractive features and are good to between 4,000 and 6,000 fpm.

ing a thermal anemometer is that it won't indicate flow direction. With a Pitot tube you can rotate the probe to find where the reading is highest, and the position of the probe indicates the direction of the flow. This can help you identify areas with swirl, eddies, or reverse flow that you will want to avoid when performing a traverse.

A straight Pitot or airfoil probe can also measure flow in both directions, so you'll know if your measuring a flow profile that isn't developed enough for an accurate measurement. Thermal anemometers can't be used for diagnosing your measurements like this.

Other issues to be aware of with thermal anemometers include:

- High sensitivity to wind, turbulence, changes in building pressure, and other airflow disturbances
- Possible reduced accuracy at low or high temperature and humidity extremes

- Probes can be fragile, and may become fouled when used in dirty environments
- The heated probe can ignite combustible gases. Do not use in flammable environments.

THE RIGHT TOOL FOR YOUR JOB

Obviously, you can put a lot of thought into selecting instruments for doing a duct traverse. The good news is, the selection can be really simple if you don't care to dig in.

Here are a few simple rules to follow if you're thinking about buying your first instrument for duct traverses or adding to your stable:

- If you'll be working on **residential or light commercial work** exclusively, you'll probably want a thermal anemometer. You'll also want a manometer for checking static pressures, but you won't need the high accuracy or the limited range that some-

times come with that accuracy for your purposes.

- If you work on **larger commercial equipment** but don't require the absolute highest accuracy, and you only measure airflow in ducts with velocities under 6,000 fpm, a thermal anemometer is probably still a great choice for versatility and convenience.
- If you're a **professional balancer working on a wide variety of systems**, you'll probably want to have both a Pitot tube setup and a thermal anemometer. This will allow you to tailor your tool to your specific measurement application, always selecting the instrument that will provide the best outcome.

You'll probably also want several Pitot probe lengths in addition to some Straight Pitot probes to further increase your options and versatility.

As is always the case with field measurement, it's good practice to double check your measurements if you suspect an issue with accuracy. Always remember to use your knowledge of the entire system to evaluate the plausibility of each measurement.

Ask yourself "given what I know about this system, does this measurement make sense?"

By taking this approach and applying the information presented in this article, you can always be sure you're using the right tool for your job. **NCI**



Ben Lipscomb is a registered Professional Engineer with over 14 years of experience in the HVAC industry including laboratory and field research, Design/Build contracting, and utility energy efficiency program design. He is National Comfort Institute's engineering manager, and may be contacted at benl@ncihvac.com.

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Summit Week 2019



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HIGH-PERFORMANCE HVAC LIVE

NCI's High-Performance HVAC Summit has become the gathering place for Performance-Based Contractors™ from across North America. It's the only event of its kind completely focused on selling and delivering High-Performance HVAC systems.

This conference is open to the entire industry. Summit is a welcoming gathering of like-minded people who are open and willing to share with their fellow performance-based professionals.



This year we feature a special focus on the entire High-Performance sales and delivery cycle, both in our General Sessions, and in our Breakout Workshops.

Each workshop will concentrate on one of the key elements of the process: Lead Generation, Lead Turnover and Setting The Appointment, The Sales Process, Handoff to Your Installation Team, and Selling High-Performance Service Agreements.

This year's breakout sessions have been extended to an hour and a half long to allow for more interactive learning. Some of the workshops even feature hands-on learning with live equipment and test instruments.

And You Won't Miss A Beat!

Summit's unique format is designed to make sure you are able to take in every single session without missing anything. Also, when you register multiple team members from your company, you can request to attend sessions as a group, or split up for maximum interaction with your fellow performance-based contractors – it's your choice!

Visit the Summit Week Website at GoToSummit.com to reserve your seats for what is shaping up to be the best Summit yet. Seats are limited this year and going fast, so don't delay, register for Summit 2019 today - and take your High-Performance HVAC business to the next level!



SPECIAL EVENTS

MEMBER NCI REWARDS
NCI Partners Reception and Tradeshow: Our Partners help make this conference possible. Show your appreciation by attending the trade show events. Who knows? You might find that next great product or idea!

Idea Meeting: All attendees are invited to this 2-part event where each participant can propose one or more ideas in the areas of lead generation and sales. Don't forget to bring your ideas and \$20 entrance fee. The best ideas split the pot for great cash prizes!

Awards Banquet: This long-standing tradition is one of the highlights of every Summit. Join us in honoring the best of the best Performance-Based HVAC contractors. You may be one of them!



Breakout Sessions & Speakers



Mike Hartman,
Thomas E. Clark, Inc.

Generate High Quality Leads With Performance Testing

Speakers: Mike Hartman and David Richardson

Most homeowners (and competitors), are unaware that the average HVAC system performs at 57% efficiency. Static pressure testing and a few other quick measurements during service and maintenance visits are the best way to expose these poorly performing systems. Learn how to share this critical information with your customers to help them discover and understand the hidden problems that rob them of the comfort and efficiency they should be getting!

Done right, a few simple tests will generate high quality leads with virtually no competition and very high conversion rates. In this highly interactive hands-on session, Mike and David will demonstrate proper testing techniques and how to explain test results, gain customer interest, and hand-off the lead.



Nancy McKeraghan,
Canco ClimateCare

Turn High-Performance Leads Into Appointments

Speakers: Nancy McKeraghan and David Holt

While it's true that "nothing happens until someone sells something", no HVAC service or installation sale is ever made without first setting an appointment. When the customer has been handled well and properly prepared by the office staff, your sales and service team are better positioned to hit a home run during each appointment.

In this session, Nancy and David will share methods high-performance contractors use to ensure their front-line office team consistently creates "wow" experiences for customers that result in more appointments and increased sales.



Michael Hyde,
Hyde's Air Conditioning

Performance-Based Selling in 12 Steps: From Test to Proposal

Speakers: Michael Hyde and Rob Falke

A Performance-Based sales call is quite different from the typical industry sales processes that focus on just selling "boxes." When executed correctly, it can be highly effective in closing more sales and delighting your customers. The key is doing the right things at the right time.

In this interactive, hands-on session, you'll learn the 12 essential steps to guide your customer through a performance-based sales visit, from efficient, high-impact testing and diagnostics, to customer engagement, to preparing and presenting a winning proposal.



Dawn Vickers-Mroczek,
GV's Heating & Cooling, Inc.

The Handoff Can Make All the Difference

Speakers: Dawn Vickers-Mroczek and John Puryear

When sales closes a job, the next step is to get it installed. Do your install guys "roll their eyes" when they get the "work order"? Are they getting the right information to ensure a successful and profitable completion? The handoff can make or break the quality and profitability of your installations.

Dawn and John will take you through each step of a well-oiled process to minimize frustration, reduce mis-steps, and ensure success for all. Discover how a sales team and installation team can better communicate and work together to produce amazing High-Performance System installations.



Jim Ball, Ball Heating
& Air Conditioning

Sell High-Performance Maintenance Agreements

Speakers: Jim Ball and Tom Johnson

Maintenance agreements are the lifeblood of every HVAC service and replacement business. The long-term relationship established with your customers provides a steady income stream that leads to greater business stability and future value.

In this workshop, Jim and Tom will share ways that they have turned their service teams into cash-generating machines through the implementation of strong performance-based maintenance agreement programs.



Reserve Your Seat Today!
Visit GoToSummit.com to find out more and to register,
or call NCI Customer Care at 800-633-7058

Register today at GoToSummit.com or call 800.633.7058

Special Sessions & Speakers

Ask the Coaches

Be sure to attend this one-hour session following our very popular Idea Meeting at 5 pm on Tuesday, April 16. This special Q&A with 5 top HVAC industry coaches will focus on customer-facing topics including sales, marketing, and customer service. This is a unique opportunity to interact directly with industry experts that can help make 2019 your best year ever.

The Coaching Team:



Brigham Dickinson,
President,
Power-Selling Pros



Drew Cameron,
Owner,
HVAC Sellutions



David Holt, Director
of Business Training
and Coaching, National
Comfort Institute



Ben Middleton,
National Sales
Training Manager,
Goodman, Inc.



Tom Piscitelli,
President,
TRUST Sales Training

Don't miss what is sure to be a spirited and highly informative session with some of the industry's best coaches at Summit 2019!

Keynote Speaker

Jennifer Bagley is a highly sought after professional speaker, the founder of the 12 Step Roadmap to Achieve Accelerated Results, and the CEO of CI Web Group, the preferred HVAC Digital Marketing Agency in US and Canada.



Jennifer's methodology will help you get clear, stay focused, and efficiently execute relevant High Leverage Activities (HLAs), getting you the results and success you really want... Faster! Her thinking is sought and used by the world's top companies such as Goodman, Amana, Ferguson and many more. For the last several years, Jennifer and her team have implemented the Accelerated Results Roadmap time and again with clients to produce extraordinary results.

Topic: How to Achieve Accelerated Results & Become the Market Leader

People are hungry for ways to get ahead, win, and accelerate results, both personally and professionally. When Accelerated Results becomes a reality, communication skills and abilities are elevated at every level. This is achieved with the presence of a system that produces clarity and focus and the ability to execute. When people have clarity, focus and execution, they are confident. When they have tools and processes that facilitate their communication objectives, they become better communicators. When a system of communication is established, the ability of the team is elevated. A rising tide raises all boats and achieves accelerated results.

Sponsored by:



Special Sessions & Speakers

Trailblazer Coaching

For as little as \$25 a month you can participate in 12 monthly High-Performance Trailblazer Coaching sessions with fellow HVAC contractors from across the country!

This program is all about you. It was designed and tested by contractors who participated in the first program launched over the past year.

Here's How it Works:

Each session is a highly interactive 45-minute web meeting, led by NCI coaches. Your first session includes a 40,000 foot overview of the entire coaching plan where you can ask questions and provide input on the areas you might need the most help with.

In each of the next 12 sessions, your coaches will lead the group in a discussion on two of the steps on the Trailblazer Roadmap below.

During the final session, just before Summit 2020, you will review where you've been, discuss successes and failures along the way, and map out your game plan for the next 12 months.

Trailblazer RoadMap

The following map illustrates the 20 areas that will be covered in the online coaching sessions. Each area is a key element to successful implementation of High-Performance Contracting. Breaking the process down into these bitesize steps will help insure your success without overwhelming you and your team.



To register for Trailblazer online coaching, go to:
ncilink.com/Trailblazer

SPECIAL PARTNER SUMMIT WEEK EVENTS

MONDAY, APRIL 15:



Air Conditioning & Heating

Goodman Business Planning Bootcamp

What if you could have the time, money and freedom that you've always wanted? Join us for an exclusive opportunity to dissect your unique business and create a roadmap to a higher quality of life! As a business owner, you deserve that!

Special pricing for Summit Attendees, Goodman/Amana Dealers, and EGIA and NCI Members

THURSDAY, APRIL 18:



Breakthrough Business Leadership: Developing A Process-Driven Company

This leadership workshop is about how to improve the execution and profitability within a contracting company. This is a powerful operators workshop designed to highlight how to lead well and drive execution not just concepts, and all the tools to do so are included.

Presented by Gary Elekes
Special pricing for EGIA and NCI Members, and Summit Attendees.

Register today at **GoToSummit.com** or call 800.633.7058



SUMMIT WEEK 2019

Schedule of Events

MONDAY, APRIL 15

- 9:00 am - 4:00 pm Goodman Business Planning Bootcamp
4:15 pm - 5:00 pm Summit Orientation Meeting - All Welcome!
6:00 pm - 8:00 pm Welcome Reception
Sponsored by Goodman

TUESDAY, APRIL 16

- 7:00 am - 9:00 am Breakfast and Interactive Opening Session
9:15 am - 10:45 am Breakout Session 1 - Workshops
11:00 am - 12:30 pm Breakout Session 2 - Workshops
12:30 pm - 2:00 pm Luncheon and General Session
2:00 pm - 3:30 pm Breakout Session 3 - Workshops
4:00 pm - 5:00 pm Idea Meetings: Lead Generation and Sales
5:00 pm - 6:00 pm NEW! Ask the Coaches
6:30 pm - 8:00 pm NCI Partners Trade Show and Reception

WEDNESDAY, APRIL 17

- 7:30 am - 8:15 am Breakfast & General Session
8:15 am - 9:00 am State of The High-Performance Industry
with NCI CEO, Dominick Guarino
9:00 am - 9:45 am Keynote Speaker: *Jennifer Bagley, CI Web Group*
Sponsored by Goodman
10:00 am - 11:30 am Breakout Session 4 - Workshops
11:30 am - 1:30 pm NCI Partners Tradeshow and Luncheon
1:30 pm - 3:00 pm Breakout Session 5 - Workshops
3:30 pm - 4:30 pm General Session:
Idea Session Winners and Partner Prize Drawing
4:30 pm - 5:00 pm Closing Remarks *with NCI President, Rob Falke*
6:00 pm - 7:00 pm Sponsor Appreciation Cocktail Reception
7:00 pm - 9:00 pm Awards Banquet and Presentation Ceremony

THURSDAY, APRIL 18: Post-Conference Training

- 8:00 am - 5:00 pm Advanced Combustion Recertification
8:00 am - 5:00 pm Airflow Testing and Diagnostics
(Qualifies for air recertification)
8:00 am - 5:00 pm EGIA Class: Breakthrough Business Leadership

EVENT & LODGING



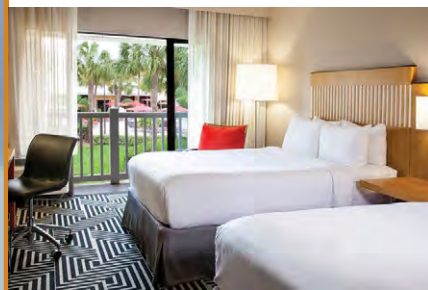
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SALES

By Mark Pippin

A Contractor's Secrets to Duct Renovation Sales

Like many contractors, I always thought I was in the business of selling HVAC equipment. At Pippin Brothers we began as a commercial plumbing and HVAC company. We were really good at that. We still are.

We eventually decided to get into the service business to take care of the warranties on our commercial jobs. Meanwhile, many of our customers began asking us to take care of their homes as well. So we decided to get into the residential repair market. And we were pretty good at that as well.

However, it wasn't until I sat in on a class being taught by Dominick Guarino, called "Tool Time," that I learned how HVAC systems aren't performing properly all across the country. He said it was because most contractors thought only about the equipment and didn't understand that we are not in the product business, but in the comfort business. He was talking about the ductwork and airflow. A light bulb went off in my head.

Comfort – that was something that could totally

make us different than everybody else. Our business, at the time, was mostly commercial. We were just getting into the residential plumbing and air conditioning markets. And we found that in our community, everything was driven on price and everyone was pretty much selling the same thing.

During that meeting I learned not only how airflow and the duct system could change my universe, but I learned we could actually prove what we installed was not only installed correctly, but was delivering the comfort and efficiency we always talk about.

That simply blew me away. Then I realized another mind-blowing thing: Pippin Brothers had been installing equipment improperly. We knew we had a lot of duct systems in customers' homes that weren't working right, and it gave me a very bad feeling.

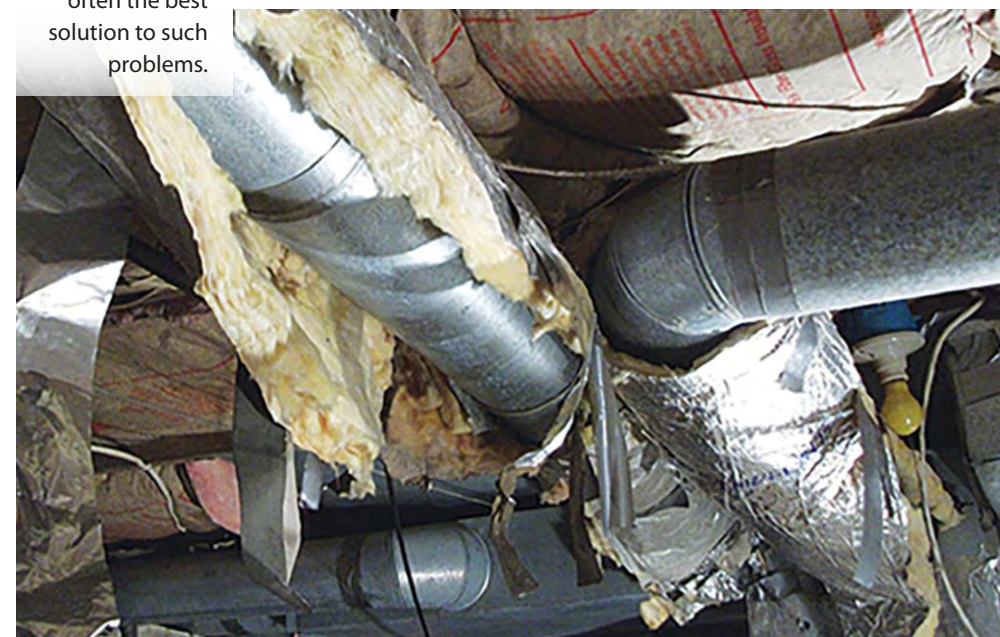
The good news was we could now fix it and then prove to the customer that it was right. None of our competitors would even know what we were talking about.

I became a Performance-Based Contractor™ that day, in my mind at least. I needed now to get my team on board and begin practicing what I was about to preach. The hardest part was explaining to my employees what we were planning to do and how important their role was in it.

A NEW APPROACH

Our focus changed to teaching our field teams about conversing to the customers. This performance approach is about being fair to the customer. We began sending our key people to residen-

Every day Pippin technicians encounter a wide array of poorly installed ducts that negatively impact customer comfort, energy efficiency, safety, and health. Renovation is often the best solution to such problems.



Register today at GoToSummit.com or call 800.633.7058

HVACTODAY.COM

MARCH 2019 31



Understanding airflow and the duct system can change your world. Even better, when properly trained, you can actually prove that what you installed is delivering the comfort and efficiency the HVAC Industry always talks about.

tial system performance training and getting them certified. We went as far as bringing NCI into our company to train our entire team about static pressure testing and measurement. And we made this testing part of our overall service and maintenance plans.

Was it easy? Not by a long shot. I found that many technicians think once they've earned their air conditioning license they know everything there is to know. It is hard to get them to do something in addition to what they think they know.

But I stuck with it. Was persistent. They fought me at first. It took months before they bought in and began taking static pressure and temperature readings on every call.

One thing we did to force the issue was to require static pressure testing on every service call. Every invoice had to be stamped that this testing was done. I inspected every single invoice, and if that stamp wasn't there, the tech had to explain to me why.

I had to keep going over it, again and again. Eventually, they started catching on. We did the training in the winter. When summer came, it got very hot here – the high 90s – and the attics became unbearably hot. Guess

what? That is when it was so much easier to show them.

In that kind of heat, after taking the four static pressure and temperature readings, they could see how we were getting anywhere from 10-20°F rises from return air grille to the unit. And sometimes the return air would be just two feet away from the unit and we have a 20°F rise. So, as it got hotter, it got easier to get the buy-in. They realized how terrible the situation was because now they could see and feel it due to the huge temperature swings.

CONVINCING CUSTOMERS

The next hard part was approaching existing customers, explaining how updated training had taught us new things, and that we needed to test their systems. It wasn't a free service. We charged for our testing and diagnosis. We were met with mixed emotions. Some customers didn't want to pay again after we'd already installed their new system.

To meet their objections, we had to explain how our training taught us things we never knew before. We had a much deeper understanding of how the entire system, not just the equipment,

works to deliver comfort and efficiency. We also explained that the dollars they already paid us were for simply changing out the equipment, not for making it function to its highest capability.

Not everyone was convinced. For those who agreed, the difference we were able to make was like night and day. Testing and diagnosing airflow through the duct systems went way beyond worrying about the refrigerant charge and making things look pretty.

The other obstacle we faced, and still face today, is that we were the only HVAC company doing this. Our competitors were telling customers that what we were doing was not necessary and that we were just looking for ways to make more money. But job after job that we completed using airflow diagnostics proved that we were delivering much more than just new equipment and that actually started catching on with our customers.

Pippin Brothers is by far more expensive than most of the competition, but we can and do prove that we deliver what we promise.

ONGOING TRAINING IS A MUST!

Though it took more than a year to get all our field teams on board, I knew it wasn't enough. Everything I learned said that ongoing training was the ONLY way to make Performance-Based Contracting work. So I brought in NCI trainers to train our entire office.

It was amazing, but it was also like drinking from a fire hose! Today this training is broken down into steps – first static pressure, then air flow. This is a much smarter way because it doesn't overwhelm our guys and they retain more of what they learn.

I was motivated by the fact that we

could make more money and deliver comfort like no one ever had before.

That is why we try to always be training our guys. Whether we do it in-house or bring professionals in, training is an ongoing process.

In addition to technical training, I needed to rethink some of our business processes here in the office. The old way of doing things just didn't work with the high-performance approach. We needed training in creating the right processes to back up our field work. So I brought in consultants like Drew Cameron to work with our salespeople as well as our support teams.

As a result, our sales team now is required to do airflow measurements either with or in front of the customer. This is usually necessary to get customer buy-in because they can actually see what is happening in each room. Prior to using flow hoods, we couldn't prove to them that airflow issues were real. Now we can.

SELLING PERFORMANCE

Our salespeople are professionals. We hire people who know how to sell and teach them about HVAC technology. They already understand the importance of building rapport and relationships with customers. Add in the time necessary to do static pressure and airflow tests, and our average sales call takes over 2 hours.

They talk to the customers, asking lots of questions about what rooms are comfortable and which ones aren't. How high are their utility bills? What works and what doesn't. In essence, they ask the customers what they want to buy and then their job is to package something up that the cus-



Sales people need to be professionals and that requires training. A lot of it. They need to be comfortable teaming up with customers – not just selling them something.

tomers says they want.

Each salesperson only does two or three sales calls per day. If we had them do more, we'd begin to see them cutting corners to get done faster, and then we'd miss opportunities.

Many of our sales leads come from the technicians doing maintenance and service work in customers' homes. The techs see the potential issues and hand off those leads to the salesperson. Then the salesperson does more investigating.

Using this process, we sell an average of 15 to 20 duct renovation or air upgrade jobs each month at an average cost to the consumer between \$3,000 and \$5,000. That includes NO equipment. Just the ductwork.

BUSINESS BASICS COUNTS

Like anything you do in your business, you need to understand your numbers. When it comes to costing jobs, you need to know your break-even point and you need to have profit margins built into what you charge. For Pippin Brothers, we use the same per-hour billable rate on duct renovations as we do on equipment changeouts.


Plus, ALL our overhead is figured into our hourly rate, as is our profit margins. So, it doesn't matter if we are doing duct renovations or change outs, we are recouping what we need per man hour to make a solid and

still fair profit.

To know these numbers means understanding your cash flow, being able to read your financial reports, and doing so often enough that you can make decisions and changes to keep your company moving forward. It really is business basics.

For those of you reading this who are new to the idea of Performance-Based Contracting™ or are in the middle of implementing it in your company, the best advice I have is for you to find a cheerleader – someone who understands it, gets the 'WOW' factor, and wants to get the rest of the team on-board. They need to understand that without a performance approach, your company is actually cheating customers.

It requires commitment, patience, and an investment in tools and time.

If you do these things, it creates a true win-win-win for your customers, your company, and your team. 

Mark Pippin is president of Pippin Brothers, Inc., a mechanical contracting firm that specializes in HVAC and plumbing services. The company began in 1978 in Lawton, OK. Mark holds a Master Plumbing license and actually grew up in the plumbing business with his father. He first began learning about airflow after hearing a presentation conducted by the National Comfort Institute and realized the "secret sauce" in HVAC is airflow. He jumped in head first and has never looked back.

NCI Intros 2019-2020 High-Performance Trailblazer Coaching

Designed and tested by HVAC contractors who participated in the inaugural program launched last year, **Trailblazer Coaching 2019-2020** will launch after the conclusion of the **High-Performance HVAC Summit Week** (gotosummit.com) in Orlando.

For as little as \$25 per month, you can participate in 12 monthly High-Performance Trailblazer Coaching sessions with fellow HVAC contractors from across the country!

HERE'S HOW IT WORKS:

Trailblazing Coaching sessions will be held the first Friday of every month at 9 AM Eastern time. Each session is a highly interactive 45-minute web meeting, led by NCI coaches.

Your first session includes a 30,000-foot overview of the entire coaching plan where you can ask questions and provide input on the areas you might need the most help with.

In each of the next 10 sessions your coaches will lead the group in a discussion on two of the steps on the Trailblazer Roadmap.

During the final session, just before Summit 2020, you will review where you've been, discuss successes and failures along the way, and map out your game plan for the next 12 months.

The map shown in Figure 1 illustrates the 20 areas that will be covered in the online coaching sessions. Each area is a key element to successful implementation of High-Performance Contracting.

Breaking the process down into these bitesize steps will help ensure your success without overwhelming you and your team.



Figure 1. The Trailblazer Roadmap covers the 20 areas addressed in the online coaching sessions. Go to ncilink.com/TBMap for a PDF version of this map.

There is special pricing for members, who can also apply their NCI bucks toward the cost. Registration will open

very soon. In the meantime, if you have any questions, be sure to call the NCI Customer Care Line at 1-800-633-7058.

Introducing a New Way to Connect with NCI

Do you know about all the training options available from NCI?

Do you know about the many benefits you get as an NCI member?

Have you ever wondered about the difference between various static pressure techniques?

Let your dedicated NCI Customer Care Representative help out!

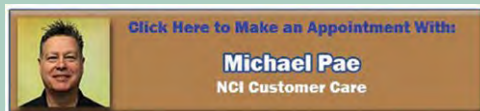
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<http://ncilink.com/AndyW>

Or call our Customer Care Hotline at 800-633-7058 to ask for help at any time during business hours.



"Doesn't Exhaust Right? Wonder Why!"

— Dustin Bowling, Provision Environmental Systems and Testing, Surgoinsville, TN

The customer just couldn't understand why the smoke from their kitchen grill wouldn't exhaust properly.

Dustin Bowling's entry took 33% of the vote in the 'Bad' category and won first place in our Photo-of-the-Month contest. He will receive a \$50 gift card.

You can too – submissions are always welcome. To submit a photo for consideration in our contest, click ncilink.com/POMSubmit and fill out the information as requested.

THE APRIL CONTEST OPENS ON MARCH 11, 2019.

That should give you plenty of time to submit something in any of our three categories: **The Good**, **The Bad**, **WTH (What the heck)**.

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Sales Manager
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Email us at contactus@hvactoday.com with your comments and questions.

10 Reasons To Make Summit Week Your Must-Attend Event This Spring



Dominick Guarino is publisher of HVAC Today magazine and CEO of National Comfort Institute, Inc. He can be reached at domg@ncihvac.com

Whether you've already integrated High-Performance testing and solutions into your service and installation business, or you're just starting out, there's no better place to take it to the next level than Summit Week this April 15-18.

NCI's High-Performance HVAC Summit is THE event of the year for Performance-Based contractors across North America. Our theme this year is the "High-Performance Sales Cycle." This impacts every part of your organization, including your technicians, CSRs, comfort advisors, and your installation team. Here are the top 10 reasons to bring your leadership team to Orlando this year:

1. Summit is your High-Performance Retreat. There is no other event in our industry so focused on every aspect of delivering measured, proven solutions to your customers. Spend several days with like-minded contractors excited to share their knowledge and learn from each other.

2. Get inspired to implement High Performance. The general sessions, our special keynote speaker, and breakout sessions will inspire you and fill your tank with new knowledge and ways to kick start your 2019 cooling season.

3. Sharpen your saw. Participate in highly interactive and hands-on breakouts where you'll get the opportunity to walk through the lead generation and sales process using test instruments on working systems.

4. Get expert advice from top industry coaches. New to Summit: This year we've invited five top industry coaches for a can't miss, highly interactive "Ask The Coaches" session.

5. Share and discover great new ideas. NCI's unique Idea Meeting focuses on sales and

marketing. It has become one of the most highly anticipated mainstays of Summit. Come prepared to share your ideas, and absorb new ideas that are working for your fellow contractors. Your idea might just win a cash prize!


6. Explore the latest products and services from our cutting-edge partners with extended exhibit times. In addition to regular tradeshow hours on Tuesday and Wednesday, our partners will be available to you throughout the conference.

7. Celebrate your peers! The highly acclaimed Awards Banquet has become a Summit favorite, as NCI members celebrate their fellow award-winning contractors and partners. Who knows? Maybe you'll be called up to be recognized.

8. Come early for the Pre-conference Business Planning Bootcamp sponsored by Goodman, and stay for post-Summit recertification classes.

9. Stay for "Breakthrough Business Leadership" training with Gary Elekes sponsored by EGIA – free to High-Performance HVAC Alliance and EGIA members.

10. Keep Summit going year-round. Sign up for our unique Trailblazer Coaching Program with your fellow High-Performance contractors. Each month your coaches will help keep you focused on your goals. Be sure to listen to what this year's participants have to share about this fantastic program at NCILink.com/trailblazer.

So what are you waiting for? Sign your team up for Summit today at GoToSummit.com, and get your Performance-Based contracting business energized and ready for your most successful and profitable year ever! 

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High-Performance Trailblazer Coaching

Keep the momentum going all year long!

Announcing NCI's 2019/2020 High-Performance Trailblazer Coaching Program

We all know how it goes... You get all pumped up at a conference and can't wait to get back home to implement all the great things you learned. But, when you return to the shop, all the firefighting pushes those great things to the "When I Have Time" pile – and they never get done.

NCI is offering a valuable new addition to your Summit 2019 experience: post-conference implementation coaching! For as little as \$35 a month, you can participate in 12 monthly High-Performance Trailblazer Coaching sessions with fellow HVAC contractors from across the country!

This program is all about you. It was designed and tested by contractors who participated in the inaugural program launched at Summit 2018. Each session is a highly interactive 45-minute web meeting, led by NCI coaches.

Here's what some of the original Trailblazers say about the program:



Mike Greany

All Pro Plumbing, Heating & Air,
Ontario, CA.

Mike Greany

All Pro Plumbing, Heating, & Air,
Ontario, CA



Everett Williamson

Bremac Heating, Cooling & Plumbing,
Mechanicsville, VA.

Everett Williamson

Bremac Heating, Cooling, & Plumbing,
Mechanicsville, VA



Jim Williamson

Jameson Electric, Heating & Air Conditioning,
Kenmore, NY.

Jim Williamson

Jameson Electric, Heating, & Air Conditioning,
Kenmore, NY

Download your Trailblazer Roadmap

This map illustrates the 20 areas that will be covered in the online coaching sessions. Breaking the process down into these bite-size steps will help insure your success without overwhelming you and your team.

<http://ncilink.com/roadmap>



Additional Bonuses:

- Pricing Calculators
- Lead Generation Tools
- Technical Reports
- Software Input Forms
- Educational Resource Library
- Coaching Session Recordings
- And much more...

To register for Trailblazer online coaching, go to:
ncilink.com/Trailblazer

