

*Test and Improve Performing  
HVAC Systems*



# Duct System Optimization & Air Balancing Certification Program

Do you want to provide your customers the very best comfort and energy efficiency, and a safe and healthy indoor environment?

It's a known fact that typical air distribution systems across North America lose, on average, 43% of an HVAC system's efficiency.

Your customers don't have to live with these substandard systems. Now you can provide real solutions!

## Learn how to deliver high quality, profitable duct system renovations that really work!

Set yourself apart from competitors by knowing how to optimize a duct system so it delivers the heating and cooling the equipment was designed to provide.

The process begins with a comprehensive evaluation of the existing duct system design, equipment sizing, followed by verification of real-time performance – not simulations.

You will then learn how to uncover air distribution upgrade opportunities to deliver the highest quality, comfort, and performance your customers want and are willing to pay for.

## Residential Air Balancing

Provide certified Air Balancing on your installations with this additional day of training and certification:

- More HVAC and energy professionals are discovering the importance of testing and balancing their installations for maximum system comfort and efficiency.
- Many building departments and utility programs now require balancing reports.
- Your ability to air balance your customers' HVAC systems will keep you ahead of the competition!

Get NCI's exclusive  
NEW Duct System  
Optimization Clip Board with the tables and  
formulas you will use every day!

**BONUS!**



  
**National Comfort Institute, Inc.**

Leading the Industry in  
Performance-Based Contracting™

# Duct System Optimization

Enhance your company's professional reputation with NCI's exclusive Duct System Optimization Certification. Establish yourself as the true HVAC distribution system expert in your market.

## Benefits:

- Identify customer comfort issues using NCI's Comfort Survey, then provide optimized solutions
- Learn how to test and diagnose air distribution systems and uncover upgrade opportunities
- Accurately estimate room airflow and pinpoint duct system deficiencies
- Use live measurements to select fans, coils, and filters
- Close more duct renovation sales using NCI's exclusive tools and techniques. Explain to customers what you're doing in a simple, easy-to-understand manner
- Produce a renovation you can prove works using a final test-out.

## Agenda:

### DAY 1: Introduction to Air Distribution Upgrade

- Why you should upgrade a duct system
- Three steps to uncover air distribution upgrade opportunities
- Use static pressure to identify duct system restrictions
- Determine fan capacity and fan airflow
- How to generate customer interest
- Show your customer how a balancing hood can help identify airflow issues in problem areas
- How to create a floor plan and duct schematic
- Document visible defects and needed changes
- Establish airflow requirements
- Estimate room airflow.

### DAY 2: Optimize the Duct System

- How to use fan capacity and fan tables
- Coil selection and filter sizing procedures
- The importance of proper airflow
- Debunk common airflow assumptions
- Understand how air moves through duct
- How to select the best duct fittings
- Envision the ideal air distribution system
- Duct renovation overview
- How to select the right registers, grilles, and diffusers
- Choose proper placement of registers grilles, and diffusers.

*The day concludes with NCI's exclusive Duct System Optimization certification exam*



*"We totally and completely embrace the NCI process – from the technicians to the installation crews to the office staff. We live and breathe NCI protocols and test procedures. Without NCI, I don't think All Pro would be where we are today."*

*Mike Greany, Service Manager  
All Pro Plumbing, Heating, and Air*

**Register now and discover the Performance-Based Contracting™ Difference!**

# Residential Air Balancing



## Benefits:

- Increase revenue and profitability by offering professional in-house balancing services that far exceed the average service and equipment replacement margins
- Improve your ability to comply with new, tighter local, state, and federal building codes and energy requirements
- Reduce system performance issues and energy consumption while improving comfort, IAQ, and customer satisfaction
- Establish yourself as the go-to professional to solve long-standing problems.

## Agenda:

### DAY 3: Testing & Balancing Residential Systems

- History and purposes of balancing
- How to properly measure and interpret static pressure
- Using a balancing hood
- How to perform an airflow traverse
- Preparing for a balancing project
- How to set fan airflow
- Air test and balance procedures
- Overcoming obstacles in the field
- Final testing and documentation.

*The day concludes with NCI's exclusive Residential Air Balancing certification exam*

### Who Should Attend?

Service & Maintenance Technicians  
Owners and Managers  
Installers  
Service & Installation Managers  
Salespeople and Sales Managers

**Call 800-633-7058**

## Frequently Asked Questions

### Q: What kind of certification do I earn?

NCI's certifications are among the most recognized in our industry. By passing the exams on Day 2 and 3 you will earn **Duct System Optimization Specialist** and **Residential Air Balancer** certifications.

### Q: How long is the certification good for and how do I get recertified?

This certification is valid for two years. Recertification is achieved with eight hours of NCI continuing education.

### Q: What are the start and end times of the class and is lunch included?

The typical NCI training day is 8:00 am to 5:00 pm. Light refreshments and lunch are included.

## Who is NCI?

National Comfort Institute, Inc. (NCI) is the world leader in HVAC System Performance and Air Balancing training. We created the industry's best practices, processes, and forms and have been teaching them for decades.

What makes NCI's approach different? We show you how to thoroughly test and diagnose the system using practical, easy-to-follow methods so you'll know exactly what to do to provide your customers with optimum comfort and energy efficiency.

NCI coined the phrase "Performance-Based Contracting™", a unique approach to managing a contracting business through accountability and measurable results. During the past two decades, NCI has trained and certified more than 25,000 HVAC industry professionals. For more information about NCI, please call **800-633-7058** or visit **[www.nationalcomfortinstitute.com](http://www.nationalcomfortinstitute.com)**.



## Additional Educational Opportunities from NCI:

- Residential HVAC System Performance & Air Balancing
- Commercial HVAC System Performance
- Introduction to Hydronic Testing, Adjusting, & Balancing
- Large Commercial Balancing (National Balancing Council)
- Airflow Testing & Diagnostics Implementation
- Combustion Performance and CO Safety
- Commercial Air Balancing
- NCI Online University



**Step Up  
To High  
Performance  
Today!**

# Deliver profitable duct system renovations that will delight your customers!



## *Duct System Optimization & Air Balancing Certification Program*



Courses Qualify for:  
NATE, BPI &  
Most State CEUs

