TAS Academy Training Catalog

2025

DERRY • NASHUA

TAS ACADEMY
EST. 2023

"Tell me and I forget, teach me and I may remember, involve me and I learn." Benjamin Franklin

TOTAL AIR SUPPLY

Amana Heating & Air Conditioning | Goodman | DAIKIN

totalairsupply.com

Course Descriptions
Goodman/Amana Equipment Specific

FREE Goodman/Amana Equipment Training

TAS Academy realizes having well trained technicians that are knowledgeable in installing, commissioning, troubleshooting & servicing the ever-changing technology of Daikin-Goodman-Amana equipment is crucial to your business's success.

To assist you in keeping your technicians up-to-date, TAS Academy is offering a group of **FREE** Goodman-Amana specific AC, Furnace & HP training classes. These classes can be done in our Nashua or Derry Training Rooms or at your facility. We can break them down to fit your install or service training meetings. We can even do them online if that is easier for you.

For more information or to schedule classes or webinars for any of the training in this catalog, call Randal at 1-603-401-0874.

Goodman/Amana 92% and 96% Single or Two-Stage Non-Communicating Gas Furnaces—Installation

Review of the 92% & 96% Goodman and Amana Non-communicating furnaces, features, nomenclature, models, accessories, Installation best practices, tips we've learned along the way, grounding, various low voltage wiring options, Heating & Cooling set-up options, start-up/Commissioning Testing and completing the Data Test Sheet

Goodman/Amana 92% - 96% Single or 2-Stage Non-Communicating Gas Furnaces—Service & Troubleshooting

The class will start with a functional overview of the furnaces, the different methods of viewing error codes, the control boards, and wiring diagrams before moving into the troubleshooting segment that will cover sequence of operation, the roles key components play in the system, the diagnostic test you need to know to confirm if a key component has failed, and test to determine if the problem is water or Airside related.

Goodman/Amana GMVC96 2-Stage & GMVM97 Modulating Communicating Blue Tooth Furnaces--Installation

These are Goodman/Amana's top of the line communicating furnaces. We start with explaining the features, nomenclature, models, accessories, & Blue Tooth Technology. We then move on to installation best practices, tips we've learned along the way, grounding, various low voltage wiring options, sensor installation and draining, The CoolCloud App, how to use it or the push buttons to set-up Heating & Cooling options, the algorithms explained, Dual Fuel settings, and start-up/commissioning Testing.

Course Descriptions
Goodman/Amana Equipment

DERRY: Goodman/Amana GMVC96 2-Stage & GMVM97 Modulating Blue Tooth Furnaces--Service & Troubleshooting

The class will start with a functional overview of the furnaces, the different methods of viewing error codes, the control boards, wiring diagrams before moving into the troubleshooting segment were we will cover troubleshooting with error codes and the CoolCloud App, rate of change algorithm, temperature sensor, sequence of operation, the roles key components play in the system, how to test them, and other tips and tricks you need to know to determine the cause of the problem and using the App to get start-up/commissioning sheet numbers.

Understanding & Troubleshooting motors Used in Goodman/Amana Furnaces

We will be discussing the three types of air circulation blower motors used in Goodman/Amana furnaces & AH's over the years, the Permanent Split Capacitor (PSC) Motor, Electronically Commutated Motor (ECM) Constant Torque Motor (CTM) and the ECM Variable Speed, Constant Volume Motor, both the 4 pin and 16 pin types.

We will discuss how each of the different motors work, how they are controlled, testing control and line voltages, Ohms testing, motor testers, determining if low airflow, a symptom of high static pressure, is the problem, or is it the motor or the end bell, speed selection and more.

TRH-4_Goodman 1 & 2 Stage AC & HP I & C

By the end of this lesson, learners will understand how to properly administer the installation and test operation procedures for single & two-stage air conditioning and heat pump equipment, including refrigerant piping, electrical wiring, drain piping, and thermostats, defrost, heat kits in accordance with current published literature guidelines using the proper tools, equipment, and instrumentation.

TRH-5_Goodman 1 & 2-Stage Heat Pumps S & T

Learner will understand the operation and proper troubleshooting techniques for the following components

- Two-Stage and defrost boards
- Compressor, crankcase heater, and unloader
- Indoor and Outdoor fan motors and capacitors
- Reversing valve and solenoid
- Comfort Alert
- Contactor and Board Relay
- High/ Low Pressure Controls

Classes for a Free

TRV-15 Amana S-Series Installation and Commissioning Seminar - FREE

This 8-hr training class be done over 2 evenings so that no one needs to take a day off from work to attend. It will cover products and technology, installation, and commissioning for the Amana S-Series Side Discharge systems. Topics covered include nomenclatures, R-32, K4R relay, unit features & benefits, Inverter technology & components, inverter benefits, some troubleshooting, compatibility, set-up, and start-up. Also covered are product information and installation procedures for the Amana S-Series furnaces, indoor coils and air handlers. Some Hands-on lab exercises are included such as using CoolCloud to update equipment and the set-up procedure for the Amana S-Series controller.

3-hr Troubleshooting with Daikin D-Checker-- FREE

The Daikin D-Checker is a software that enables you to monitor or record operation data of Daikin mini/multi-split systems and other Daikin equipment. You can use the Daikin Air Conditioner Monitoring Tool app, along with the Daikin Air Conditioner Monitoring Tool wireless adapter (model: BTSC/12S). This software assists the technician by displaying real-time system data and potential issues. The class will begin with a presentation explaining the D-Checker App, the information you will see and how it all ties together to operate the system at peak efficiency and them some examples to help you better understand how to interpret the numbers you are seeing.

DAIKIN MINI/MULTI SPLIT INSTALLATION – FREE

This **two-evening class** includes exercises on wiring, tube-flaring, torque wrench set up and use, pressure testing, evacuation, charging and error code retrieving. This class is a prerequisite for the Service and Troubleshooting class. You must register for a free Dakin City account. Call Randal for details at (603) 845-1710.

DAIKIN MINI/MULTI SPLIT SERVICE AND TROUBLESHOOTING

In this **two-evening class,** attendees will learn the operation and functionality of the components of a Daikin Ductless system. We will also cover troubleshooting techniques for the single- and multi-split systems, tools required to troubleshoot mechanical and electronic components, details of the Inverter Analyzer and the Bluetooth D-Checker software program. The **installation class is a prerequisite** for this Service and Troubleshooting class.

Online -- R32 is Here-What's Changed and What to Expect in The Field – FREE

This webinar will be different from most R32 Webinars. We will go over the things you need to know about R32 Rule Changes, How to work Safely with R32, a refrigerant that falls under the subclass A2L, which rates it as having a lower flammability capability. We will cover standards for R32 Recovery machines, vacuum pumps, leak detectors, gauges, hoses, recovery tanks, etc. What will make this presentation different is we will go

Classes for Free

over the R32 Pressure Temperature Chart and then a few examples of what you will see for operating temperatures & pressures at different indoor and outdoor temperatures.

THERMAL EXPANSION VALVES
TEV to some, TXV to others FREE

This **two-hour webinar will** cover.

- The main parts of the TXV
- The TEV has three Main Functions
- What a TEV Doesn't Do
- Multiple Circuit Evaporators
- Forces that operate the TXV and how they work
- Best Installation Practices for TXV installation
- How to diagnose and troubleshoot.

YouTube

We are continuously adding more TAS Academy Training Videos to our YouTube page. Please check it out and don't forget to subscribe so you won't miss any of the NEW videos that we will be dropping.

https://www.youtube.com/@TotalAirSupply

GoToWebinar

Surveys show that many of todays technicians prefer not to take in Classroom training if possible. They prefer YouTube videos, Webinars & Prerecorded webinars.

TAS Academy wants to provide up-to-date training on topics in the ever-changing HVAC Industry with the training methods todays modern technicians prefer to receive it with.

We will announce in the late October TAS Academy Newsletter the opening of our **FREE** prerecorded training webinars library. This library will be where we put the topics that need 1 to 3 hours to cover and will be available to you 24/7/365 and 366 on leap year. We will continue to post shorter videos on the YouTube Page.

The initial offerings will most likely be:

- **Gas Pipe Sizing** with the Longest Length Method
- **Our Three-Part Series** on Reading wiring diagrams, Sequence of Operations and Troubleshooting with the Sequence of Operations
- **Diagnosing Heat Exchanger Issues** and the problems you will encounter
- **Calculating Combustion Air requirements** for Non-direct vented appliances

Classes for a Fee

6 Hour NH Gasfitter License Renewal Seminar Modules 2024 & 2025 8 am to 2:30 pm $80—This Saturday Class will cover the 2024 & 2025 code update modules required by the State of New Hampshire for your Gasfitter License renewal. *Those who want to attend just *one module may attend the 2024 segment from 8-11 am or the 2025 module from 11 am to 2:30 pm depending on your needs. The cost will be $40 per unit.* *A total of Two, 3-hour modules are required to renew your NH Gasfitter License.

Seminars alternate monthly between our Derry & Nashua locations.

EPA 608 Refrigerant Certification
Review & Testing $130
Testing Only $70

The two-day review consists of a PowerPoint presentation that gives a better understanding of the study guide material, accompanying charts and how the test questions are asked. Please note that this presentation should not be considered a substitute for studying. It is intended to be a final review before the test. An email address is required to register for the review webinar. Please register early to ensure you receive the study guide via email.

Randal's AC Boot Camp $185



This four-evening, 12-hour, seminar covers key topics related to the refrigeration cycle. Participants will learn about superheat, subcooling, amp draw and temperature splits, as well as evacuation and leak checking. Additionally, we will explore the role of airflow in the refrigeration process and its importance during charging. The seminar includes information on R-410A and R-32 refrigerants, system components, startup procedures and basic troubleshooting techniques using meters, temperature probes and diagnostic sheets.

Duct Sizing with Manual D $175

This 12 hour, Four evening class, covers what is needed to size a residential duct system. We start on night 1 with some basics of heat loss and gain and finish by completing two residential Duct Designs, one in the basement and one in the attic including grilles, registers and diffusers. This is not a Duct Design Software class. **Attendees will do all sizing work on Manual D worksheet so they will see what is going on at every step of the process.** *This class contains an incredible amount of information so pdf files of the presentations and other documents will be given for further review at the attendee's leisure.

https://www.youtube.com/@TotalAirSupply

TRAIN WITH THE BEST, *WHEREVER YOU CHOOSE.*

INSTRUCTOR



RANDAL S. RIPLEY

Randal S. Ripley has 31 years in the HVAC industry, with the last 21 years as Technical Support/Field Tech and Trainer for Total Air Supply. Randal is a certified Daikin Mini/Multi Split Instructor, certified NH Gasfitter Continuing Education Instructor, service level-certified in several NATE disciplines and has taught hundreds of classes since 2004.

LOCATIONS

Derry CDC

1 B St., Derry, NH 03038



Nashua

171 E. Hollis St., Nashua, NH 03060



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