

# Lohmiller & Company /Carrier West

## Fall 2010 Training

To enroll in a class please go to [www.lohmiller.com](http://www.lohmiller.com), "Training Calendar"  
Or fill out a sign-up slip and take it to the Parts Counter.

### New Dealer Training

Thurs, 9-11 a.m., Rotating Locations, Mark Sandgren & Salesman, Cost: Free

6/17/10	CSP - Colo. Springs	8/26/10	LCDC	11/04/10	FTC
6/24/10	LCDC - Denver North	9/2/10	FTC	11/11/10	CSP
7/8/10	FTC- Fort Collins	9/9/10	CSP	11/17/10	LCDC (Wednesday)
7/15/10	CSP	9/16/10	LCDC	12/02/10	FTC
7/22/10	LCDC	10/07/10	FTC	12/09/10	CSP
8/12/10	FTC	10/14/10	CSP	12/15/10	LCDC (Wednesday)
8/19/10	CSP	10/21/10	LCDC		

### HAP Training by Carrier Corporation

#### HAP Basic Training

This is a hands-on session covering the basic operation of the Hourly Analysis Program (HAP). Training covers cooling and heating design loads with an introduction to energy analysis. The user learns the fundamentals of weather data, scheduling of loads, inputting building parameters, and modeling of the various air systems and plants.

**Date:** August 3, 2010 **Schedule:** 8:30 a.m. to 5:00 p.m. **Course No:** SSN0001 **Tuition:** \$300.00 US

#### HAP Advanced Training

HAP Advanced Training focuses on building energy simulation. Training covers in-depth, hands-on operation of energy analysis including simulation weather, energy profiles, air systems, plant performance, utility rate modeling, and includes analysis of multiple building scenarios.

**Date:** August 4, 2010 **Schedule:** 8:30 a.m. to 5:00 p.m. **Course No:** SSN0002 **Tuition:** \$300.00 US

#### HAP for LEED® Certification Training

This intense 1 day class presented by Carrier Software Systems focuses on the **LEED® EA credit 1**, Optimized Energy Performance. Advanced HAP techniques are applied to Whole Building Energy Simulation and ASHRAE/IESNA Standard 90.1-2004 and 2007 requirements. Training covers in-depth, hands-on application of baseline and proposed building energy analysis and includes development of creative HVAC system alternatives for more LEED-NC/LEED-Building Design & Construction points including the new LEED 2009 requirements.

**Prerequisite:** Prior knowledge of HAP load estimating and energy simulation is helpful but not mandatory, LEED 2009 EAc1 and ASHRAE 90.1 Appendix G familiarity is recommended.

**Date:** August 5, 2010 **Schedule:** 8:30 a.m. to 5:00 p.m. **Course No:** SSN0005 **Tuition:** \$300.00 US

# Training Tuesdays

3-5:30 p.m. in the Training Room at 4800 Osage St.  
and via video conferencing at all locations. Cost: Free

- 9/14/10      **Venting**  
A comprehensive review -installation of vent pipe for Carrier/Bryant/Payne 90% furnaces.
- 10/5/10      **RTU IGC Controllers**  
A comprehensive review -troubleshooting IGC Boards-operation and error codes will be covered.
- 10/12/10     **95% Furnaces and Tax Credits**  
A comprehensive review of 95% furnaces from a sales prospective.
- 10/19/10     **58MVC / 355CAV Infinity Evolution 90% Furnaces**  
A comprehensive review of the step modulating furnace and it's operation.
- 10/26/10     **Heat Pumps and Tax Credits**  
A comprehensive review of heat pumps from a sales prospective.
- 11/2/10      **Heat Pumps**  
A comprehensive review of wiring and set up for stand alone and dual fuel operations.
- 11/9/10      **Schwank Radiant Heaters**  
A comprehensive review of Schwank radiant heaters from a sales prospective.
- 11/16/10     **Edge TStats**  
A comprehensive review: wiring and configuration of Edge thermostats.
- 11/23/10     **Triad Boiler Systems**  
A comprehensive review of Triad boiler systems from a sales prospective.
- 11/30/10     **Load Calculation**
- 12/7/10      **Infinity Evolution Controls**  
A comprehensive review -operation, configuration and sequence of Infinity/ Evolution controls.
- 12/14/10     **Humidification - General Aire**  
A comprehensive review of humidification from a sales prospective.

## 06D/E Compressor Familiarization/Teardown

This course will include familiarization/teardown, operation compressor performance, unloader operation and adjustment of the Carlyle O6D and O6E semi-hermetic compressor. The student will be taught when to make modifications and how to troubleshoot these compressors effectively. The technician will also learn hands-on methods to determine why compressors fail and when to condemn a compressor. Instructors: Ringo Ginter and Dave Pezdirtz

***Students bring their own tools: 1/2" drive socket, allen wrenches, mallet & basic hand tools***

Date/Time: Thursday, Sept 9, 2010      4:00 pm – 8:00 pm  
Location: 4800 Osage, Denver  
Tuition: \$100.00      Mech IV hrs: 4  
Dinner provided  
Class size: Minimum 10, Maximum 15

## R410A Class

The purpose of this class is to provide training on R410A refrigerant. We will be covering proper installation and service with the R410A Products. Carrier West offers an air conditioner designed to deliver exceptional indoor weather while using the environmentally sound refrigerant – R410A, for both residential and commercial applications. There will be hands-on training with R410A to show proper charging and operating techniques. Instructor: Mark Sandgren

Date/Time: Wednesday, Sept 15, 2010                      4:00 pm – 8:00 pm  
Location: 4800 Osage, Denver  
Tuition: \$100.00    Mech IV hrs: 4  
Dinner provided  
Class size: Minimum 10, Maximum 15

## Talon Operators Class

**Prerequisite:** Technician will have a working knowledge of basic PC skills, and HVAC skills. The technician will also have a basic understanding of HVAC Controls.

**Objective:** Upon completion the tech should have the ability to log into a site and view graphics, alarms, and change standard set points. The training will focus on how to connect and view a site, graphics, histories, alarms and control. Instructors: Dan Gale and Justin Howard

Date/Time: Monday, September 20, 2010                      8:00 am – 12 noon  
Location: 4800 Osage Street, Denver  
Tuition: \$100.00                      Lunch is NOT included  
Class size: Minimum 3, Maximum 6

## Service Tool V

Service Tool V is a non-graphical PC software used to interface and configure Carrier chillers, VAV rooftops and CCN control devices. This class is designed to provide an overview of Carrier's Service Tool V software including software navigation, accessing CCN devices, performing CCN bus scans and addressing/configuring control components. An overview of Carrier's iVu graphical front-end system will also be covered in this course. Instructor: Stan Arbour.

***Please bring your laptop with Service Tool V loaded on it to the class.***

Date/Time: Monday, September 20, 2010                      2:00 pm – 6 pm  
Location: 4800 Osage Street, Denver  
Tuition: \$100.00                      \$525.00 with Service Tool Software  
Class size: Minimum 3, Maximum 6                      Dinner is NOT included

## iVu Operators Class

This course is a general overview of the Carrier iVu web interface. It will include scheduling, trending and basic navigation of a Carrier CCN system. Some advanced functions of the iVu will also be covered. Instructor: Nate Gagliano

Date/Time: Tuesday, September 21, 2010      8:00 am – Noon  
Location: 4800 Osage, Denver  
Tuition: \$100.00      Lunch is NOT provided  
Class size: Minimum 3, Maximum 6

## Talon Programming Class

**Prerequisite:** Technician will have a working knowledge of basic PC skills, Network skills, and HVAC skills. The technician will also have a basic understanding of HVAC Controls.

**Objective:** Upon completion the tech should have a working knowledge of logging into a site and the ability to follow the logic. They will have the ability to modify or add logic for their controls. The training will focus on Talon hardware, software, and hands on programming, including Talon Network Manager, Lonworks Predator, and BACnet TEC type controls. The class will cover basic DDC Architecture. Instructor: Dan Gale

Date/Time: Wednesday through Friday, September 22-24, 2010      8:00 am – 4:00 pm  
Location: 4800 Osage Street , Denver  
Tuition: \$650.00      Lunch provided  
Class size: Minimum 3, Maximum 6

## 3V Controls Certification

This class will cover how to install and configure Carrier's 3V VVT Controls and the Constant Volume RTU Controls (Premier Link) using wall mounted System Pilot interface device. Completion of this class will enable the participating contractors to purchase and install Carrier's 3V VVT System and Premier Link DDC systems. Instructor: Dave Burson

Date/Time: Tuesday-Wednesday, September 28-29, 2010      8:00 am – 4:00 pm  
Location: 4800 Osage Street , Denver  
Tuition: \$450.00  
Lunch provided  
Class size: Minimum 3, Maximum 6

## CCN Controller Overview and Troubleshooting

This course is an overview of the CCN controllers most widely used in Carrier projects. It will include basic setup and troubleshooting of Comfort ID VAV, 3V, Fan Coil, Premier Link and CC6400. Participants should be familiar with Service Tool V and have basic knowledge of the Carrier CCN system. Instructor: Roy Stinemeyer

Date/Time: Thursday, September 30, 2010      8:00 am – 4:00 pm  
Location: 4800 Osage, Denver  
Tuition: \$310.00      Lunch provided  
Class size: Minimum 3, Maximum 6

## NATE Prep Class

This optional A/C and heating prep class will prepare the student to take the NATE Core and Specialty Exams. To be NATE certified the student must pass the Core Exam plus one Specialty Exam.

Instructor: Mark Sandgren

Date/Time: Wednesday, October 6, 2010 4:00 pm – 8:00 pm

Location: 4800 Osage, Denver

Tuition: \$100.00

Dinner provided Class Size: Minimum 10, Maximum 15

## NATE Testing

The day of testing please bring a #2 pencil and a calculator with you as well as your NATE number. The tests will be proctored by Mark Sandgren.

### **Core Exam (at least one required)**

Core Exam Installation \$115/each

Core Exam Service \$115/each

### **Specialty Exam (at least one required)**

Air Conditioning Installation \$115/each

Air Conditioning Service \$115/each

Gas Heating Installation \$115/each

Gas Heating Service \$115/each

Heat Pumps Installation \$115/each

Heat Pumps Service \$115/each

Date/Time: Wednesday, November 3, 2010

4:00 pm – 8:00 pm

Location: 4800 Osage, Denver

Dinner is NOT provided

## Troubleshooting Furnaces

This two-evening class is designed to help the technician or service manager organize their approach to service calls and zero in on the actual problems. They will learn how to accurately read their electrical wiring schematics and troubleshoot furnaces for proper diagnosis. Included are hands-on troubleshooting of 80% and 90% furnaces.

*Students bring their own basic hand tools and meters.*

Instructors: Mark Sandgren and Dave Pezdirtz

Date/Time: Wednesday & Thursday, October 20 & 21, 2010

4:00 pm – 8:00 pm

Location: 4800 Osage Street, Denver

Tuition: \$185.00

Dinner provided each night

Class size: Minimum 10, Maximum 15

## Hands On Rooftops

This two night class offers an overview of Carrier's small tonnage rooftops (3-25 tons) with standard electro-mechanical controls. Basics of refrigeration system charging and heating/cooling operation and troubleshooting of Carrier IGC board will be covered. The hands on trainers are actual RTU control panels that offer real life troubleshooting of a Carrier RTU. Instructors: Ringo Ginter and Dave Pezdirtz

Date/Time: Wednesday & Thursday, October 27 & 28, 2010

4:00 pm – 8:00 pm

Location: 4800 Osage Street, Denver

Tuition: \$185.00

Dinner provided each night

Class size: Minimum 10, Maximum 15

## Infinity Zoning

Attendance of this 1 evening class will cover the features and benefits of the Carrier/Bryant Infinity/Evolution Zoning System and equipment. Participants will learn how to install, program and trouble-shoot the Infinity/Evolution Zoning Systems. Class will also include hands-on demo and set-up of operating equipment.

Instructor: Mark Sandgren

Date/Time: Wednesday, November 10, 2010

4:00 pm – 8:00 pm

Location: 4800 Osage Street, Denver

Tuition: \$100.00

Dinner provided each night

Class size: Minimum 10, Maximum 15

## Comfortlink VAV Rooftops

Comfortlink Controls is the format that Carrier has been using for all of their DDC compatible units. This course will concentrate on the configurations and sequencing of the VAV logic used in these controllers. The hands on training panels simulate Carrier 48/50 A series, Z series and larger P series units.

**Prerequisite:** Introduction to Comfortlink Controllers or field use of Comfortlink controls.

Instructor: Ringo Ginter

Date/Time: Wednesday, November 17, 2010

4:00 pm - 8:00 pm

Location: 4800 Osage Street, Denver

Tuition: \$100.00      Dinner provided

Class size: Minimum 10, Maximum 15