

# Spring 2012 Training Catalog



WholeServer™



[www.ProTecsInstitute.com](http://www.ProTecsInstitute.com)

866-894-8200

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## **Why Train at RSC?**

- Award winning & nationally recognized instructors
- Instructors are NATE or AHRI Certified
- **Three** labs in Cleveland: HVAC, Refrigeration & Sheet Metal
- **Two** labs in Columbus: HVAC & Refrigeration
- All skills classes applied for State license & NATE certification
- 3 hour classes vs. competitors' 2 hours (earns quicker state license credit)
- Extensive curriculum –
  - 1) Weekly classes with individual topics
  - 2) 9-12 week mini-series courses
  - 3) 12-18 week semester long programs.
- EPA Refrigerant Certification & NATE training / test sessions.
- NATE tests available online 5 days a week; 8am & 5pm.
- Visit us online at [www.ProTecsInstitute.com](http://www.ProTecsInstitute.com)

### **For Class Information & Registration Call:**

**Diane Carlin at 216-525-8236 or Jack Tobik at 216-525-8232**

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## **RSC Training Instructors**

### **Robert Chervin**

A 30 year, NATE certified industry veteran and graduate of Columbus State. Bob has owned his own HVAC company since 1979.

### **James Filliez**

Associated with the industry for over 55 years, specializing in steam and hydronic systems. He is an RSES Certificate Member Specialist (CMS) and currently owns his own company.

### **Jack Tobik**

Jack has 26 years in the industry, first as a Territory Manager for RSC, and the last 6 years as Manager of Training. During that time he's been responsible for conducting seminars on sales, business management, service management, load estimating, and customer relations.

### **John Hillery**

He is the former Service Manager for RSC's Tech Support Department, and prior to that had his own business. He is NATE certified and is presently retired, training part time.

### **James Price**

Jim spent 18 years in the field as a service tech. He has two college degrees, is NATE certified, and now works for RSC as a Technical Service Advisor. He has twice been selected as Trainer of The Year by Carrier Corporation.

### **Vince Rich**

He is RSC's Commercial Service Manager. He has a degree from the University of Akron, spent 18 years as a commercial field technician and is AHRI certified. He has three times been selected as Trainer of The Year by Carrier Corporation.

### **Rick Rogers**

Rick has 20 years of field experience, graduated from Columbus State, and is RSC's Service Manager for Central Ohio. He is NATE certified in multiple specialties. He has three times been selected as Trainer of The Year by Carrier Corporation.

### **Shawn Stapinski**

Shawn is the Residential Service Manager for RSC with 15 years of prior field experience. He is a graduate of McKim Institute, NATE certified, and has three times been selected as Trainer of The Year by Carrier Corporation.

### **Chris Shaffer**

Chris has 30+ years in the HVACR field, is NATE certified, with formal training through the RSES program. He spent 15 years in the field as a refrigeration technician and is now the Service Manager for a large commercial contractor.

### **Richard Wirtz**

Richard is a former professor at a central Ohio technical college, who has extensive field experience in HVAC, and holds four RSES Certificate Member Specialist designations, as well as being NATE certified.

### **Kenneth Shvorob**

Ken is a 26 year, NATE certified industry veteran, with a degree from West Side Institute. After 15 years in the field, he worked for an HVAC wholesaler and is presently employed at a local mechanical contractor.

### **Steve Wagner**

Steve has 37 plus years in HVAC, first as a tech, then a business owner, a Technical Service Advisor, and now the training manager for a major manufacturer. He is both RSES and NATE certified.

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## **Best in Class.....Three Years in a Row!**



RSC was awarded distributor trainer of the year by Carrier Corporation for 2008, 2009 & 2010.

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# Air Conditioning Technology Program

## Spring Semester: Valley View & Columbus Locations

Investment: \$1795; plus \$169 book & materials fee.

*ProTecs dealers: ask about your discount!*

An intensive 18 week, one-night-a-week course designed for the entry or intermediate level service / install technician who wants to advance his air conditioning skills. Includes classroom and hands-on lab activities with NATE certified instructors.

Students take the AHRI Industry Competency Exam (I.C.E.) at the end of the program to obtain certification.

### State-of-the-Art HVAC Labs

Our spacious lab includes 10 operational furnaces and air conditioners, with both newer and older models, providing a real world, hands-on understanding.



### Topics Covered:

- Electrical for A/C
- Refrigerant cycles
- A/C Components
- Compressors
- Controls
- Standard operating conditions
- Safety
- Heat Pumps
- Evacuation and charging
- Refrigerant handling
- A/C troubleshooting

### Class Schedule

#### Cleveland:

January 25th to June 6th, 2012

Wednesday evenings,  
6:00 PM to 9:30 PM

Instructor: Shawn Stapinski

9450 Allen Drive - Suite A,  
Valley View, Ohio 44125

#### Columbus:

January 24th to June 5th, 2012

Tuesday evenings,  
6:00 PM to 9:30 PM

Instructor: Rick Rogers

2571 Silver Drive,  
Columbus, Ohio 43211

Contact Diane Carlin @ 216-525-8236 or CarlinD@RefrigerationSales.net

**Register Online & Save \$50! - [www.ProTecsInstitute.com](http://www.ProTecsInstitute.com)**

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## **Commercial Technology Program**

### **Spring Semester: Valley View Location.**

**Investment: \$1795, plus \$169 books and materials fee.**

***ProTecs dealers: ask about your discount!***

An intensive 18 week, one-night-a-week course designed for the HVAC Technician who wants to move into light commercial service, or for an existing tech who wants to advance his commercial skills. Includes classroom and hands-on lab activities.

Students take the AHRI Light Commercial Exam at the end of the program to obtain certification.

### **State-of-the-Art HVAC Lab**

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Our HVAC lab includes heating and cooling systems, a ducted rooftop unit, semi-hermetic compressors, and a commercial air handling unit which provides a real world, hands-on understanding of commercial HVAC.

### **Topics Covered:**

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- Commercial fundamentals
- Rooftop installations
- Rooftop operating cycles
- Economizers
- Compressors
- Wiring
- Controls
- Troubleshooting
- Commercial splits
- Refrigerant piping
- Maintenance
- Ducting & air flow
- Chiller operation

### **Class Schedule**

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January 24th to June 5th 2012

Tuesday evenings:

6:00 PM to 9:30 PM

Instructor: Vince Rich

9450 Allen Drive, Suite A,  
Valley View, Ohio 44125



**Register Online & Save \$50! - [www.ProTecsInstitute.com](http://www.ProTecsInstitute.com)**

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## Commercial Refrigeration

### Spring Semester: Columbus Location.

Investment: \$945 + \$169 book and material fee

**Back For a  
2nd Consecutive  
Year!**

Don't miss this 9-week program aimed at the residential/light commercial tech who wants to acquire commercial refrigeration skills. You'll get the classroom knowledge, plus valuable hands-on lab experience.

### Topics Covered:

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- Refrigeration cycle
- Metering Devices
- Controls & Accessories
- Evacuation/charging
- Supermarket refrigeration
- Walk-in freezers & coolers
- Ice machines
- Electrical / Wiring
- Troubleshooting

### Class Schedule

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March 8, 2011 to May 10, 2012  
Thursday evenings, 5:30pm to 9:00pm  
Instructor: Richard Wirtz

Contact Diane Carlin @ 216-525-8236 or CarlinD@RefrigerationSales.net



All Classes Are State  
License Certified

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## Steam Heat

### Spring Semester: Valley View Location

Investment: \$295

**Back For a  
2nd Consecutive  
Year!**

The successor to our highly rated Hydronics Series, Steam Heat is aimed at intermediate and advanced techs who want to improve their knowledge and troubleshooting skills. This 3-part series is special training on a subject that is hard to find.

### Topics Covered:

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- Hydronic & Steam Heat Differentiation
- Generating Steam
- Near Boiler Piping
- Steam System Piping
- Steam System Controls
- Cleaning a Steam Boiler
- Troubleshooting

### Class Schedule

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February 8th, 15th, & 22nd, 2012  
Thursday evenings, 5:30pm to 8:30pm, 9450 Allen Drive, Vally View  
Instructor: Jim Filliez

Contact Diane Carlin @ 216-525-8236 or CarlinD@RefrigerationSales.net

# Valley View – Spring 2012 Skills Training Schedule

RSC | 9450 Allen Drive | Valley View, OH 44125

Investment: \$109 RSC customers, \$89 ProTecs, unless noted otherwise.

Date	Class Title	Instructor	Times
1/16	Carrier Furnace Troubleshooting Bible I	Shawn Stapinski	5:30p-8:30p
1/23	Carrier Furnace Troubleshooting Bible II	Shawn Stapinski	5:30p-8:30p
1/26	Service Options: Repair vs. Replace	Jack Tobik	5:30p-8:30p
1/26	Rooftops	Vince Rich	8:30a-12:30p
1/30	Carrier Furnace Troubleshooting Bible III	Shawn Stapinski	5:30p-8:30p
2/2	NATE A/C & Heat Pump Test Prep	Jim Price	5:30p-8:30p
2/6	Carrier Furnace Troubleshooting Bible IV	Shawn Stapinski	5:30p-8:30p
2/8	Understanding Wiring Diagrams	John Hillery	8:30a-12:30p
2/9	NATE Core Test Prep	Jim Price	5:30p-8:30p
2/13	Carrier Furnace Troubleshooting Bible V	Shawn Stapinski	5:30p-8:30p
2/15	It's In The Can – Compressors	John Hillery	8:30a-12:30p
2/16	NATE Testing – All Levels Offered	Jack Tobik	8:30a-12:30p
2/20	Carrier Furnace Troubleshooting Bible VI	Shawn Stapinski	5:30p-8:30p
2/23	Economizers	Vince Rich	8:30a-12:30p
2/27	Air Flow Management	Jim Price	5:30p-8:30p
3/8	Commercial Splits	Vince Rich	8:30a-12:30p
3/12	A/C Principles I: Evaporators & Metering Devices	Ken Shvorob	5:30p-8:30p
3/19	A/C Principles II: Condensers & Compressors	Ken Shvorob	5:30p-8:30p
3/26	A/C Principles III: System Troubleshooting	Ken Shvorob	5:30p-8:30p
4/2	Evacuate & Recover With <b>Speed</b>	Shawn Stapinski	5:30p-8:30p
4/4	Brazing & Coil Repair	John Hillery	8:30a-12:30p
4/9	Heat Pump Fundamentals	Jim Price	5:30p-8:30p
4/19	48PG Rooftops	Vince Rich	8:30a-12:30p
4/23	TXV Service & Troubleshooting	Gregg Melzer	5:30p-8:30p
5/2	Psychrometrics: Air Properties, Measurement	John Hillery	8:30a-12:30p
5/3	EPA Refrigerant Class & Test Fee: \$195 for book, class, & test	Jim Price	4:00p-9:00p
5/7	Geothermal Install, Service, Troubleshooting	Ken Shvorob	5:30p-8:30p
5/14	Electrical Fundamentals	Jim Price	5:30p-8:30

## Sales & Customer Relations

1/23	Service Options: Repair vs. Replace	Jack Tobik	5:30p-8:30p
4/10 & 11	Residential Load Estimating: REVS Method	Jack Tobik	8:30a-4:30p
4/24 & 25	Residential Load Estimating: Manual J8 AE	Jack Tobik	8:30a-4:30p
5/21	Superior Customer Service for Techs	Jack Tobik	5:30p-8:30p



All Classes Applied for State License & NATE Certification

## Akron – Spring 2012 Skills Training Schedule

RSC Classroom | 175 East South Street | Akron, OH 44311

**Investment: \$109 RSC customers, \$89 ProTecs, unless otherwise noted**

Date	Class Title	Instructor	Times
1/25	Psychrometrics: Air Properties & Measurement	John Hillery	8:30a-12:30p
2/8	Electrical Fundamentals	Jim Price	5:30p-8:30p
2/16	Commercial Splits	Vince Rich	8:30a-12:30p
2/27	Geothermal Install, Service, & Troubleshooting	Ken Shvorob	5:30p-8:30p
3/7	Understanding Wiring Diagrams	John Hillery	8:30a-12:30p
3/15	Rooftops	Vince Rich	8:30a-12:30p
3/21	It's In The Can – Compressors	John Hillery	8:30a-12:30p
3/29	Economizers	Vince Rich	8:30a-12:30p
4/2	EPA Refrigerant Class & Test Fee- \$195 for text, class, & test	Jim Price	4:00p-9:00p
4/9	A/C Principles I: Evaporators & Metering Devices	Ken Shvorob	5:30p-8:30p
4/16	A/C Principles II: Condensers & Compressors	Ken Shvorob	5:30p-8:30p
4/23	A/C Principles III: System Troubleshooting	Ken Shvorob	5:30p-8:30p
4/30	Evacuate & Recover With <b>Speed</b>	Shawn Stapinski	5:30p-8:30p
5/10	48PG Rooftops	Vince Rich	8:30a-12:30p
5/21	Heat Pump Fundamentals	Jim Price	5:30p-8:30p

## Columbus – Spring 2012 Skills Training Schedule

RSC Classroom | 2571 Silver Drive | Columbus, OH 43211

**Investment: \$109 RSC customers, \$89 ProTecs, unless otherwise noted**

Date	Class Title	Instructor	Times
1/19	Evacuation & Charging with <b>Speed</b>	Rick Rogers	5:30p-8:30p
2/1	NATE A/C & Heat Pump Test Prep	Bob Chervin	5:30p-8:30p
2/8	NATE Core Test Prep	Bob Chervin	5:30p-8:30p
2/15	NATE Testing – all specialties	Rick Rogers	8:30a-12:30p
2/16	Rooftops	Rick Rogers	5:30p-8:30p
3/15	Electrical Troubleshooting	Rick Rogers	5:30p-8:30p
3/28	EPA Refrigerant Class & Test Fee: \$195 for book, class, & test	Bob Chervin	4:00p-9:00p
4/12	A/C & Heat Pump Troubleshooting	Rick Rogers	5:30p-8:30p
4/25	Air Flow Management	Steve Wagner	5:30p-8:30p
5/3	TXV Service & Troubleshooting	Larry Hammond	5:30p-8:30p
5/10	ECM Motors	Rick Rogers	5:30p-8:30p

### Sales & Customer Relations

1/26	Superior Customer Service for Techs	Jack Tobik	5:30p-8:30p
3/21	Service Options: Repair vs. Replace	Jack Tobik	5:30p-8:30p



All Classes Applied for State License & NATE Certification

# The Carrier Furnace Troubleshooting Bible

This series of classes is based on Shawn Stapinski's 25-year experience servicing Carrier furnaces, either as a field technician or Residential Service Manager for RSC. The class is a self help guide for troubleshooting Carrier furnaces; covering units from 1985 to the present. The class manual will provide the quickest methods for accurate diagnoses on over 20 different units. It includes numerous troubleshooting tips not found in material published by Carrier. **Demonstrations and hands-on exercises** will supplement the classroom activities.

Tuition for the complete series is \$595. **Classes are not available individually.** A printed manual will be provided for future reference.



## Topics Covered:

- Natural draft furnaces: 58GP/GS/DR/DP
- Draft-induced furnaces: 58SS/PAV/RAV/ZAV/STA/DLA
- Condensing furnaces: 58SX/MX/MXA/MCB/MEB/MEC
- Two-stage draft-induced: 58TUA/TMA/CTA/UHV/CVA
- Two-stage condensing: 58MTA/MTB/SXB/SXC/VUA/MVP/MVC

## Class Schedule

January 16, Part 1

January 23, Part 2

January 30, Part 3

February 6, Part 4

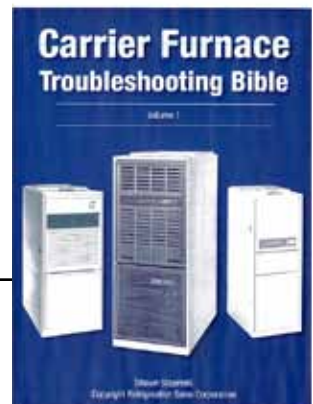
February 13, Part 5

February 20, Part 6

5:30pm - 8:30pm each evening

Instructor: Shawn Stapinski, NATE certified  
9450 Allen Drive, Valley View, OH 44125

**Special Offer!** Individual copies of Shawn's newly released book are available for only \$37.95. Call Jack Tobik at 216-525-8232 or e-mail [TobikJ@RefrigerationSales.net](mailto:TobikJ@RefrigerationSales.net).



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## Skills Training Class Descriptions

**ECM Motor Technology** - Learn how to accurately, and efficiently troubleshoot ECM-driven motors. Become familiar with ECM versions 2.1, 2.5, 3.0, and x-13. Topics include motor identification, module replacement, identifying failures, and tech tips. Course is state license and NATE certified for 3 hours.

**EPA Refrigerant Certification** – Course prepares attendees to take the EPA Section 608 Refrigerant Certification Test. Subject material includes core, small appliances, high pressure appliances, and low pressure machines, such as chillers. EPA test concludes second half of session. Course is state license and NATE certified for 3 hours.

**Brazing & Coil Repair** – This class enables students to repair copper coils without destroying them. Covers oxy/acetylene, acetylene-only, nitrogen propane, soft solder, and silver solder techniques. Hands-on practice for maximum effectiveness. Course is state license and NATE certified for 3 hours.

**Rooftops** – Covers the installation, operation, and troubleshooting of Carrier/Bryant rooftop package units from 3 to 25 tons with R-410a refrigerant. Subjects include the IGC board, compressor lockout, accutrol metering device, and economizer logic controls. State license and NATE certified for 3 hours.

**NATE Training: Core & A/C, Heat Pumps** – Prep for both the NATE Core and A/C or Heat Pump Exams. Core covers soft skills, tools, safety, math, comfort fundamentals, and electrical. A/C & Heat Pumps reviews refrigeration principles, heat properties, and measurement. NATE & state approved for 3 hours.

**Furnace Troubleshooting** – Addresses troubleshooting techniques for standing pilot, natural draft, draft-induced, and condensing furnaces. Topics are: sequence of operation, combustion air and venting, gas & ignition controls, electrical, and troubleshooting. State and NATE approved for 3 hours.

**Economizers** – This class will cover the initial set-up, controls, operation, and troubleshooting of Carrier factory installed and Micrometal economizers. Also addresses the operation and troubleshooting of Johnson and Honeywell logic controls. State license and NATE approved for 3 hours.

**Commercial Split Systems** – Reviews the installation, operation, and troubleshooting of Carrier commercial split system equipment. Subjects are: system plusses/ minuses, piping, oil return, TXV's, capacity control, low ambient, and hot gas bypass. State license and NATE approved for 3 hours.

**It's In The Can** – Do you know what's going on inside a compressor? What should be happening? What are the operating characteristics, safety considerations, and effective troubleshooting techniques? All of these will be covered, plus how to condemn a compressor. State license and NATE approved for 3 hours.

**Heat Pump Troubleshooting** - This timely topic will discuss how to troubleshoot refrigeration circuits, fixed and non-fixed metering devices, compressors, and electrical failures. It will also include diagnosing system charge problems, non-condensables, and calculating airflow, plus reversing valves and the defrost process. State and NATE certified for 3 hours.

**Airflow Management** – Topics will include determining proper static pressure, poor duct practices, using a duct calculator, calculating actual airflow, assessing system adequacy, return & supply grille locations, installation & troubleshooting tips. State license and NATE approved for 3 hours.

**Evacuate and Charge with Speed** – In this program, we will demonstrate quick, efficient, and safe methods for **speedy** refrigerant removal and recovery of A/C and refrigeration machines. Students will learn techniques for improved flow rates, with the ability to hold a vacuum of 500 microns (or even less!) for extended periods of time. Be able to evacuate most systems in 6 minutes or less. NATE and state approved for 3 hours.

**TXV Installation, Service, & Troubleshooting** – Manufacturers are using TXV's to achieve higher SEER's. How well can you troubleshoot them? Get up to speed on the refrigeration cycle and components, theory of TXV's, installation tips, troubleshooting, & servicing. State license/ NATE approved for 3 hours.

**Geothermal Install, Service & Troubleshooting** – This class will equip you to: understand equipment installation, operation, and maintenance, pressure drop calculations, heat of extraction/exhaustion, desuperheaters, controls, and troubleshooting. State license/NATE approved for 3 hours.

**Air Properties and Measurement** – Focus is on understanding air and its properties via a psychrometric chart. Topics include system air flow calculations, system capacity calculations, and air side problems which cause poor system performance. State license and NATE approved for 3 hours.

**Electrical Fundamentals** – For those with a basic understanding of wiring diagrams, this course will provide skills needed to solve heating/cooling problems. Topics addressed: troubleshooting strategies, schematic diagrams, troubleshooting aids, diagnosing faults and motor circuit testing. State license and NATE approved for 3 hours.

**Residential Load Estimating: REVS & Manual J8 AE** – These seminars will cover load estimating using both the REVS method and a short form Manual J 8th edition. Several sample houses will be assigned to assure understanding of the material. Proper airflow for each room will also be calculated, enabling the salesperson to know beforehand which rooms are candidates for poor heating/cooling problems. Approved for 12 hours of state license credit.

**A/C Principles I: Evaporators & Metering Devices** – This course is aimed at improving the technician's understanding of the function and performance of the low side of a refrigeration system: evaporators and metering devices. Regarding the evaporator, topics will focus on latent heat, sensible heat, superheat, temperature differences, refrigerant condition, proper air flow, and humidity removal. Metering device subjects will include principles of expansion devices, TXV's, fixed-bore metering devices, affects of systems temperature and pressure, superheat, and troubleshooting.

**A/C Principles II: Condensers & Compressors** – The compression cycle, along with the condenser, is part of the high side of a refrigeration system. But compressors also function in the low side as well. In this course, we'll investigate the functions of a compressor, reciprocating, scrolls, refrigerant's effect on compressor operation, and describe causes for compressor problems and their solutions. We'll also examine condenser functions and operation, subcooling, flash gas, and condenser troubleshooting.

**A/C Principles III: System Troubleshooting** – This course will enhance the A/C troubleshooting skills of the technician through proper collection of information and then troubleshooting to the root cause. Topics will address system pressures, temperatures, voltage reading, amp draws, refrigerant charge, air flow, compressor flooding & slugging, all aimed at improving environment comfort and efficient and reliable system operation.

**Service Options: Repair vs. Replace** – This class equips techs with the knowledge, tools, and skills to know when and how to recommend replacement instead of a repair. Topics covered include: equipment life expectancy, life cycle analysis, operating costs, improvements in HVAC technology, when replacement makes sense, and why replacement makes sense. Applied for 3 hours of state license credit.

**Superior Customer Service for Techs** – This workshop teaches technicians skills they can use to increase the level of service they provide to customers. All aspects of a service call are addressed, from arriving at the home, assessing the situation, examining the system, presenting solutions, to completing the invoice and collecting payment. Special effort is made to emphasize the customer's needs for accessories and maintenance agreements. Applied for 3 hours of state license credit.





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