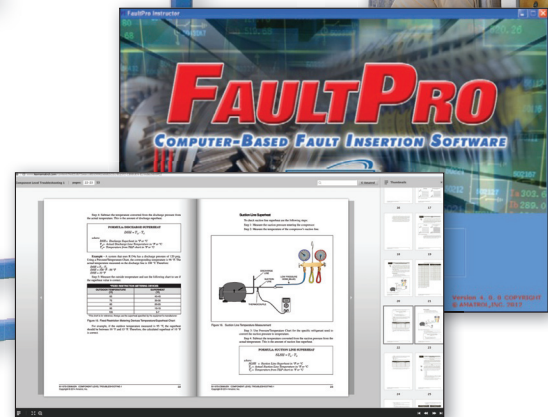
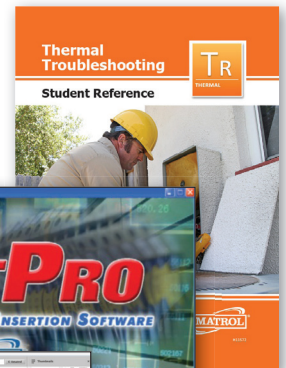
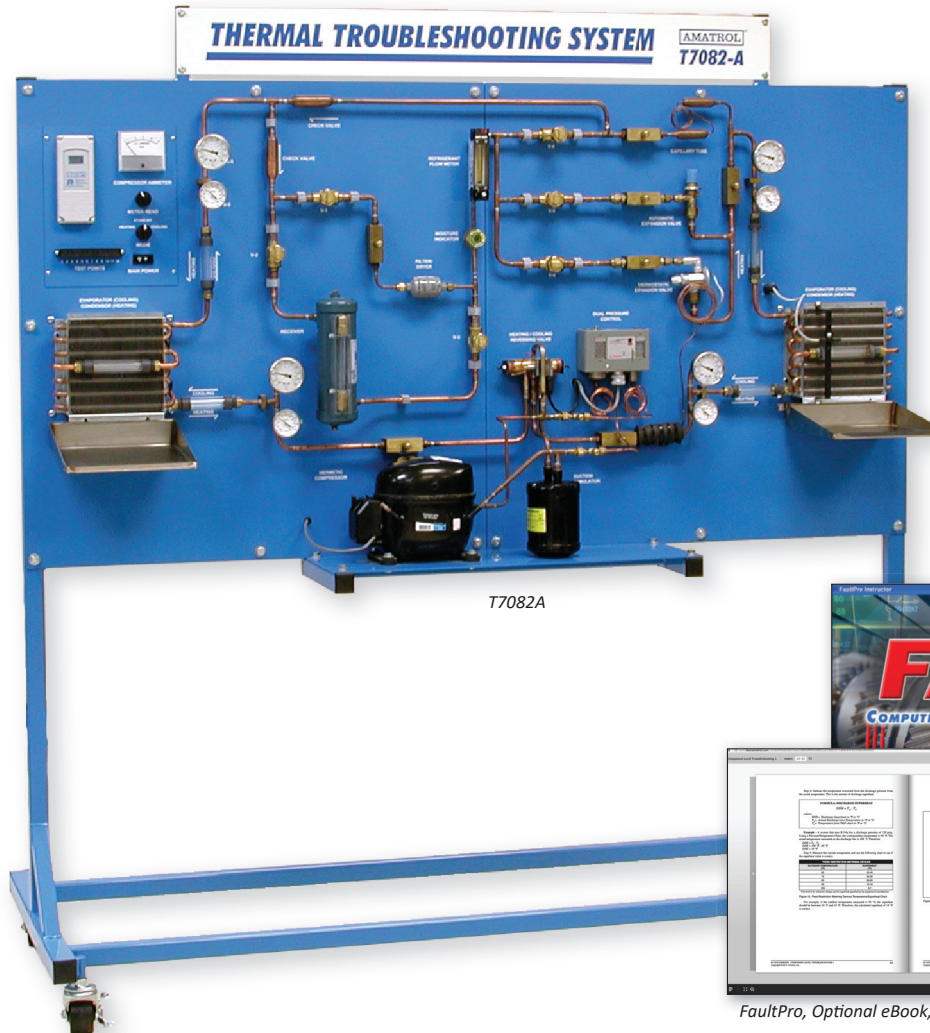


# Air Conditioning / Heat Pump Troubleshooting Learning System

T7082A



FaultPro, Optional eBook, and Student Reference Guide

## Learning Topics:

- Refrigeration
- Compressors
- Condensers
- Metering Devices
- Evaporators
- Temperature Control Devices
- Pressure Control Devices
- Reversing Valves and Refrigerants
- Thermal Troubleshooting Measurements
- Component Level Troubleshooting
- System Level Troubleshooting

Amatrol's Air Conditioning / Heat Pump Troubleshooting Learning System (T7082A) teaches valuable troubleshooting skills on a hands-on learning system that performs heat pump, air conditioning and refrigeration operation. The T7082A utilizes FaultPro, the industry's only electronic troubleshooting system, to provide a hands-on experience for identifying faults such as blockages, leakage, and refrigerant overcharging and undercharging. Thermal systems play a key role in industrial, commercial and residential applications to provide heating and cooling of spaces and processes. This system is ideal for HVAC technicians and installers.

The T7082A System consists of a mobile workstation, compressor, pressure control system, refrigeration circuit, instrumentation set, temperature control system, blower control system, and much more! These components will provide hands-on experience for operating, adjusting, and troubleshooting air conditioning / heat pump systems in real-world, on-the-job applications. Learners will gain this knowledge by studying major topic areas like compressors, condensers, metering devices, evaporators, temperature and pressure control devices, and reversing valves.



## Technical Data

Complete technical specifications available upon request.

Mobile Workstation  
Fault Troubleshooting System  
Flow Meter  
Expansion Valves  
Pressure/Temperature Gauges  
Evaporator  
Dual Pressure Control Device  
Reversing Valve  
Suction Accumulator  
Hermetic Compressor  
Receiver  
Condenser  
Ammeter  
Electronic Temperature Controller  
Mode Switch  
Check Valve  
Shutoff Valve  
Filter/Dryer  
Moisture Indicator  
Shrader Valve  
Valve Wrench  
USB Cable and Interface  
Student Curriculum (B11572)  
Instructors Guide (C11572)  
Install Guide (D11572)  
Student Reference Guide (H11572)

### Additional Requirements:

R134a refrigerant  
Computer, see requirements at  
[www.amatrol.com/support](http://www.amatrol.com/support)

### Utilities:

Electricity (120 VAC/60 Hz/1 phase) OR  
Electricity (220 VAC/60 Hz/3 phase) OR  
Electricity (240 VAC/50 Hz/3 phase)

## Learn Troubleshooting Skills on a System that Offers Realistic Faults

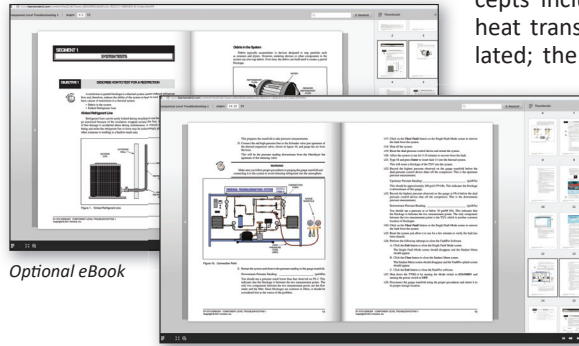
Amatrol's FaultPro allows learners to insert faults as they go through the curriculum as part of the learning process. Additionally, instructors can instantly set faults to test and track a learner's troubleshooting abilities. The T7082A features twenty-four faults in areas like electrical, refrigerant flow, and component adjustment. Some specific troubleshooting skills include: testing for a blockage; testing a blower; troubleshooting insufficient heating; and troubleshooting system cuts-out. FaultPro features online control of the troubleshooting activity through menu-driven screens, making it easy to set up and perform troubleshooting exercises for both practice and testing sessions.



The T7082A features a variety of industrial components like flow meters, expansion valves, pressure/temperature gauges, evaporators, reversing valves, and many more! Learners will use these components to practice hands-on, skill-building tasks such as determining the amount of subcooling in a mechanical refrigeration system, setting the pressures on a dual-pressure control device, using a gauge manifold to measure thermal system pressure, testing a thermostatic expansion valve, and testing a compressor.

## Unmatched Heating / Cooling Content with Optional eBook Format

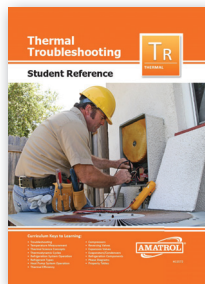
The T7082A includes world-class heating and cooling troubleshooting curriculum that covers major topics areas like heat transfer, dual-pressure devices, filter/dryers and moisture indicators, refrigerants, and an array of troubleshooting topics. Specifically, learners will study concepts including: how to calculate a conduction heat transfer rate; how mass flow rate is calculated; the function of a sight glass/moisture indicator; how to test an automatic expansion valve; and how to troubleshoot insufficient cooling. In addition to the included printed curriculum, Amatrol also offers this course in an online eBook format. Amatrol's eBooks provide easy, quick navigation and searchable course content in an online, computer-based format.



Optional eBook

## Environmental Applications Learning System

The Environmental Applications Learning System (T7083) adds to the T7082A to teach heating and cooling applications. The T7083 models the characteristics of a living structure with outside environmental effects, such as sun or humidity, and internal design characteristics such as insulation, lighting, and ceiling fans.



## Student Reference Guide

A sample copy of the Thermal Troubleshooting Student Reference Guide is also included with the system for your evaluation. Sourced from the system's curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.

