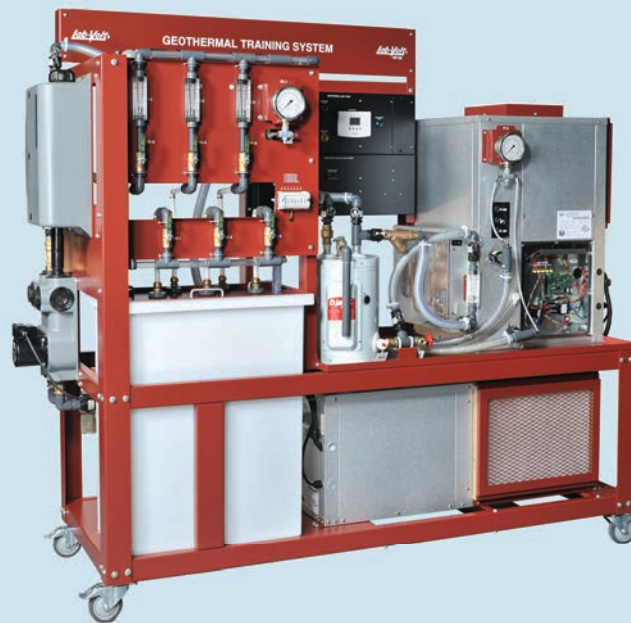


# Geothermal Training System

LabVolt Series 46126

**FESTO**



## Bring a Complete Geothermal Home Energy System to your Classroom

Designed to teach the fundamentals of refrigeration, heat transfer, and air-conditioning applied to a geothermal HVAC project, the Geothermal Energy Training System faithfully reproduces the operation of a real geothermal residential system.

Accompanied by detailed theory and practical exercises, this trainer provides the most efficient way to acquire the knowledge and skills put into practice every day in the geothermal industry.

The system includes complete curriculum, measuring instruments, and security devices required to protect the users and the equipment.

## Benefits

- Real-world commercial components
- Includes a complete curriculum covering a wide range of topics
- Suitable for varied educational requirements: future system designer and builder, maintenance technician, student learning energy efficiency
- Six electrical faults for teaching troubleshooting
- Ability to measure the temperature and add a ground temperature control option
- Varying length ground loops
- Energy recovery system

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### Main components

The system is designed to maximize learning capabilities by regrouping every subsystem that is found in a real geothermal home energy installation. It consists of a:

- geothermal heat pump,
- ground-loop heat exchanger,
- pumping station,
- domestic hot water system,
- circulation pump,
- control panel, and
- the instrumentation required to measure the operating parameters.

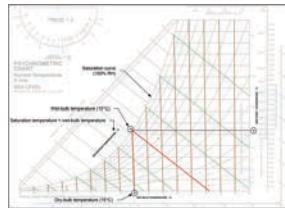


All components are mounted in a mobile workstation that is sized to fit through standard door openings. A ground temperature controller option is also available.

### Topic coverage

- Geothermal Energy
- The Ground Loop
- Heat Pump Connections and Interior Piping
- Heat Pump Control and Safety
- The Refrigeration Cycle
- Psychrometrics
- Geothermal Heat Pumps
- Heat Exchangers
- Heat Pump Control and Safety Devices
- System Characterization
- Maintenance and Troubleshooting
- Geothermal Software Design Tools
- Estimated program duration: 30 hours

### Examples of job sheets exercises and theory



Psychrometrics



Ground loop installation



Heat exchangers



Maintenance and troubleshooting

**Find out more about this system and other renewable energies training systems at [www.labvolt.com](http://www.labvolt.com).**

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