

EDS[®] Solar Thermal

LabVolt Series Model 46121

FESTO



Efficient and realistic hands-on training

The EDS[®] Solar Thermal training system forms a complete hybrid energy training solution that demonstrates how solar radiant energy can be harnessed from the sun and converted to solar thermal energy in order to elevate air, water, and surface temperatures within a residential home or commercial business.

This realistic system provides a safe, small-scale hot water supply, radiator, and hydronic floor heating system. The trainer permits experimenting with open- and closed-loop heating systems. The main (primary) loop can collect thermal energy and a secondary loop can distribute and apply heat to a gas, liquid, or solid in order to dissipate the thermal energy.

Benefits

- Includes everything required to function as a stand-alone, hands-on learning workstation
- Made with the same components that students will potentially see in their own homes, schools, or workplace
- Manufactured to the highest quality standards
- Wide range of commercial-grade components
- Fixed plate electrical panel has all electrical devices securely fixed to the side of the trainer with a power supply, differential controller, thermostat controller, and connection block
- Comprehensive curriculum consisting of fully-illustrated student manuals containing job sheets and/or work orders
- Estimated program duration: 32 hours

EDS® Solar Thermal

LabVolt Series Model 46121

Various realistic operating environments

The EDS® Solar Thermal training system allows trainees to build various solar thermal systems, from the very basic swimming pool solar heater to a multiple loop system featuring air and floor applications. Trainees will place the components and complete all the piping connections. All electrical devices are securely fixed to a panel on the right side of the trainer.



Main components

- Solar Collector
- Recirculation Pumps
- Storage Tank
- Plate Heat Exchanger
- Differential Controller
- Thermostat Controller
- Expansion Tanks
- Radiator
- Radiant Floor
- Pressure Relief Valve
- Check Valve
- Shut-Off Valve
- Fill Bowl
- Air Vent/Bleeder
- Dual Flood Light

Measuring instruments

- Thermometers
- Rotameters (flow)
- Pressure Gauge
- Digital Multimeter

Topics covered

- Introduction to Solar Thermal Energy
- Thermal Energy Fundamentals
 - Trainer Familiarization and Safety
 - Site Analysis
 - System Sizing

- Solar Thermal Energy Systems
- Solar Heating and Cooling Systems
 - Collecting Thermal Energy
 - Storing/Exchanging Thermal Energy
 - Supplying/Controlling Thermal Energy

Multi-Loop Systems

- Closed-Loop Water Heating Trainer Familiarization and Safety
- Closed-Loop Surface Heating
- Closed-Loop Air Heating
- Closed-Loop Drainback Systems
- Closed-Loop Combination Systems

Order numbers

230V	8046646
120V	8046647

Festo Didactic SE

Rechbergstraße 3
73770 Denkendorf
Germany
Phone: +49/711/3467-0
Fax: +49/711/34754-88500
did@de.festo.com
www.festo-didactic.com