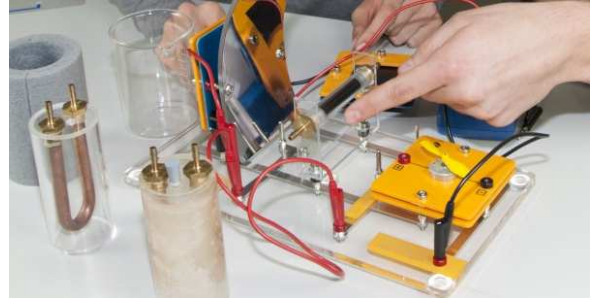


THERMAL ENERGY TRAINING SYSTEM



FEATURES

- Thermal Energy Training System allows for the application of different technologies of solar thermal energy transformation in technical education.
- Thermal Energy Training System contains various solar collector systems, which can be operated with or without pumps.
- Thermal Energy Training System also has CSP-technology (Concentrated Solar Power) and a Peltier element for the direct transformation into electric energy.
- It includes experiments regarding the basics of thermodynamics like absorption of heat radiation & the convective flow of heat which provides a comprehensive understanding of the applied physical effects.
- Thermal Energy Training System provides flexible and location-independent usability that doesn't require any additional equipment.

EXPERIMENTS

- Absorptivity and reflectivity of different materials
- Focusing of light by a Fresnel lens
- Thermal convection and layering
- Thermal conduction
- Thermal insulation
- Solar thermal collector with pump circulation
- Solar thermal collector with thermosiphon circulation
- Variation of the flow speed
- Collector circuit with heat exchanger
- Collector circuit with paraffin heat reservoir
- Parabolic trough collector with pump cycle
- Defocussing
- Qualitative demonstration of the functional principle
- Investigating the thermoelectric generator
- Quantitative determination of the electrical power

COMPONENTS

- Base Unit Large
- Motor module without gear
- Solar collector
- Parabolic reflector
- Absorber tube
- Lens module
- Absorber module for lens
- Absorber B/W
- Pump module
- Peltier module
- Heat exchanger water
- Heat exchanger paraffin
- Hose-set
- Power Module
- Sorting rubber d=65, mark P
- Propeller
- Safety test lead, 50cm, red
- Safety test lead, 50cm, black
- Lamp housing
- Illuminant infrared 230V
- Safety plug, black
- Safety plug, red
- safety socket adapter SA 4000 red
- safety socket adapter SA 4000 black
- Digital Multimeter
- Laboratory thermometer
- Beaker 250 ml
- Temperature measuring sensor
- Cooling pad
- Aluminum case