

# SOLAR THERMAL ENERGY TRAINER



## Overview

This option of the Solar Thermal Energy Trainer consists of a solar thermal panel and an array of halogen lamps as a sun simulator. The position of Sun Simulator can be controlled manually using joysticks and also from the software. The trainer allows to simulate real light, daytime, yeartime and investigate the performance in different irradiation. The trainer allows to study the main principles of converting solar energy to thermal energy.

## List of Experiments

- ✓ Structure and design of a solar thermal panels
- ✓ Study of the efficiency of the solar thermal panel
- ✓ Study of the influence of the inclination angle of the sun simulator on the unit efficiency
- ✓ Study of the relation between the flow and the temperature
- ✓ Determination of hydraulic resistance of pipelines