

Product Name :
Geothermal Energy With Two-Well System

Product Code :
ENGLABINGCAG790002



Description :

Geothermal Energy With Two-Well System

Technical Specification :

The scope of geothermal energy is the study and use of the heat and the temperature distribution in the ground. A near-surface geothermal plant uses the thermal energy stored below the earth's surface. Using a two-well system, for example, thermal energy is extracted from the near-surface groundwater for heating purposes.

It demonstrates the operation of such a two-well system.

Learning objectives/experiments

- Fundamentals of geothermal use
- Operating behaviour of a two-well system
- Hydraulic properties of the ground
- Determination of the usable heat capacity
- Fundamentals and energy balance of a simulated heat pump

Specification

- Demonstration and operation of a two-well system for using geothermal energy
- Temperature-controlled groundwater circuit
- Height-adjustable overflows for adjusting the groundwater flow
- Adjustable flow rate of the pump in the production well
- Measurement of temperature and flow rate to determine the transmitted heat capacity

Multi-tube manometer for visualising the groundwater levels
Supply of the working medium via laboratory supply or the water chiller
Calculation of the transmitted heat capacity and simulation of the energy balance of a heat pump



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