

Subject Areas

Geothermal Energy



Subject Areas

Products

The effective use of geothermal energy requires a geothermal field with elevated temperature, effective heat transfer to the subsequent cycles and the efficient use of the energy. Depending on the temperature level of the source, geothermal energy can be used for heating only or for conversion to electricity with utilisation of the residual heat.

Both types of usage require heat exchangers to transfer the extracted heat to the subsequent cycles. The disadvantage of multiple cycles is the energy loss during heat transfer. The main advantage is a much longer service life of the system, since corrosive components are prevented. In geothermal systems, water circuits and refrigerant circuits with heat pumps are used for heating purposes. The water circuit is the more efficient option, since it does not require electrical energy for a heat pump. However, the temperature of the geothermal field must be higher.

The conversion into electricity, for example in steam turbines, requires higher temperatures again, which can be found in deep geothermal energy. The energy gained is used to operate a steam circuit with turbine and generator, which produces electricity.

Heat exchangers

- WL 110**
Heat Exchanger Supply Unit
- WL 110.01**
Tubular Heat Exchanger
- WL 110.02**
Plate Heat Exchanger
- WL 110.03**
Shell & Tube Heat Exchanger
- WL 110.04**
Jacketed Vessel with Stirrer & Coil
- WL 315C**
Trainer for Various Heat Exchangers

Shallow geothermal energy

- ET 101**
Simple Compression Refrigeration Circuit
- ET 262**
Geothermal Probe with Heatpipe Principle
- ET 264**
Geothermal Energy with 2-Well System
- HL 320**
Solar Thermal Energy and Heat Pump Modular System (Combination 3)

Deep geothermal energy

- ET 850**
Steam Generator
- ET 851**
Axial Steam Turbine

