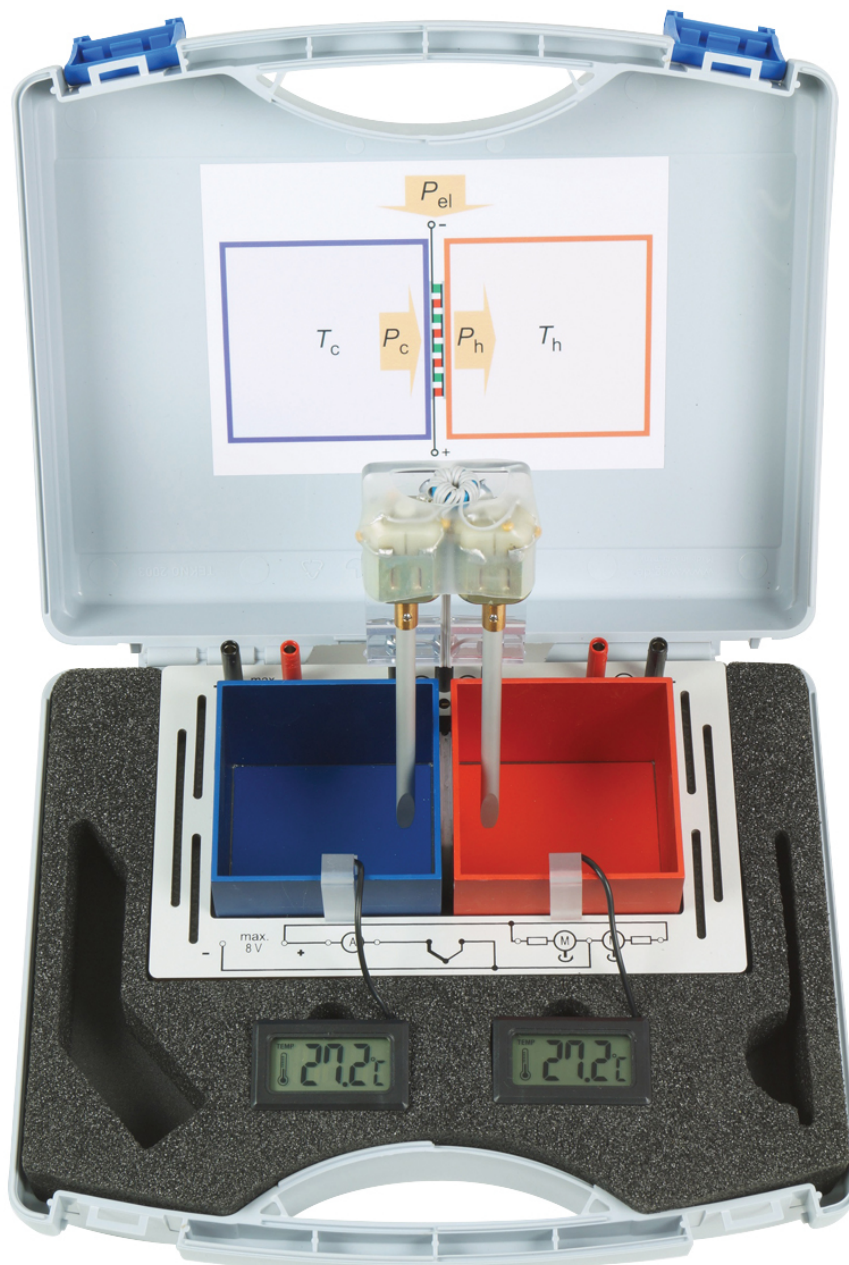


U8557570 - Peltier Heat Pump
Order code: **5401.1020769**



Cena bez DPH
Price with VAT

499,00 Eur
603,79 Eur

Parameters
Quantitative unit

ks

Working model with aluminium water tanks which are thermally coupled to the surfaces of a Peltier element. When an electric current flows through the Peltier element, heat is transferred between the tanks, causing one of them to cool and the other to heat up. Each of the reservoirs has an electric stirrer to ensure even distribution of the heat. Two digital thermometers indicate the respective water temperatures. Since the specific heat capacity of the system is known, it is possible to determine the power involved in heating and cooling and for a comparison to be made with the electrical power supplied. The system is supplied in a handy transport case which also ensures sufficient thermal insulation from the surroundings.

Peltier element: YES

Supply voltage: 5 - 8 V

Current consumption at 8 V: 2.5 - 3.5 A

Surface area: 40x40 mm²

Thickness: 3.7 mm

Water tanks: YES

Volume: 200 ml

Weight: 105 g

Stirrer: YES

Current consumption: 100 mA approx.

Carrying case: YES

Dimensions: approx. 244x160x70 mm³

Weight: approx. 920 g

Experiment Topics:

- Peltier heat pump in symmetrical and asymmetrical operation
- Recording of temperature over time during pumping and settling phases
- Heating, cooling and electrical power, power coefficient, efficiency
- Seebeck coefficient
- Peltier effect, Joule losses, heat reflux due to the conduction of heat by Peltier element
- Heat transfer and thermal conduction coefficients
- How the thermal voltage and operating voltage depend on the temperature difference