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Product Name:

Domestic Water Heating With Flat Collector

Product Code: LBNY-0005-12500022



Description:

The trainer can be used to demonstrate the principal aspects of solar thermal domestic water heating in a system with components used in real world applications. The heat then gets into the hot water circuit via a heat exchanger. Radiant energy is converted into heat in a commercially available flat collector and transferred to a heat transfer fluid in the solar circuit.

Learning Objectives/Experiments:

Determining the collector efficiency

Relationship between temperature difference and collector efficiency

Determining the net power

Familiarization with the functions of the flat collector and the solar circuit

Relationship between flow and net power.

Technical Specification:

Trainer for investigating the function and operating behaviour of a flat collector

Solar circulation station with pump, expansion vessel and safety valve

Hot water circuit with buffer tank, pump and plate heat exchanger

Four bimetallic thermometers

Solar thermal flat collector with selectively absorbing coating

Adjustable collector tilt angle

Solar controller with temperature, flow and illuminance sensors.



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