
Based on experimental data, the impacts of refrigerant charge, solar radiation intensity, and ambient temperature on the performances of evacuated tube type DX-SAHP ...

The Direct Expansion Solar Heat Pump (DX-SHP) is an innovative system that combines solar thermal energy and a heat pump to provide sustainable heating solutions.

This paper examines the T-type direct expansion solar PVT heat pump system, which employs solar radiation to simulta-neously generate electrical and thermal energy.

To this end, an experimental setup was constructed for direct-expansion photovoltaic (PVT) solar heat pump water heating systems and photovoltaic (PV) power ...

This study experimentally investigates the operational characteristics of a direct expansion solar assisted photovoltaic/thermal (PV/T) heat pump system under varying ...

This study develops a mathematical model for the evaporator of a Direct Expansion Solar-Assisted Heat Pump (DX-SAHP) to analyze pressure behavior when the system is ...

Scientists in India have conducted an extensive review of all direct expansion solar heat pump technology in an effort to broaden its residential adoption.

Direct expansion solar assisted heat pump (DX-SAHP) systems have the potential to provide the heat load required for domestic hot water (DHW) sustainably and with minimum ...

This paper proposes a novel approach for improving the performance of a direct-expansion solar-assisted heat pump (DX-SAHP) system by integrating a crystallisation controllable phase ...

The Direct Expansion Solar Assisted Heat Pump (DX-SAHP) system is a distinct form of solar-assisted heat pump that integrates solar collectors and heat pumps directly, ...

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