



SOLAR ABSORBER HEAT PUMP ON PANELS HYBRIDS PVT

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Li-Mithra[®] obtains the title V Dynamic System for its energy solution 4 in 1 (Production of electricity, hot water, heating and air conditioning).

After obtaining a European qualification ETV (Environmental Technology Verification) certified by the LNE in early 2018 justifying the performance of his system with an annual COP of 6.6 at the latitude of Strasbourg, Li-Mithra comes from validate its title V for its innovative energy system.

A number of sites are equipped with this system and supervised for several years (Tennis club, nursery, town hall and multipurpose room, detached house) Throughout France confirming the expected performance and reliability of the system.

As a reminder, the system consists of hybrid solar panels (bi-glass photovoltaic panel with a heat exchanger (glycol water) aluminum on the back), energy source of a triple-service heat pump specifically designed and regulated by the Li-Mithra[®] engineers.

This direct sensing process works regardless of the outdoor conditions (day / night, sun / rain / snow, summer / winter) and provides 100% of the heat needed for heating and hot water.

The solar optimization of the system is twofold:

Photovoltaic production is self-consumed by the heat pump (real-time communication with the photovoltaic system)

Solar heat maximizes heat pump performance

The heat (hot water, heating) is thus stored and produced free of charge during the day and returned at night.

With an area of 30 m² of panels in region H1a, optimization thermal storage reduces the Cep of the system (Heating, Domestic Hot Water, Auxiliary) by 10 to 15%. In the summer, the system produces free-charge cold in the buffer tank to provide air conditioning requirements.

At the photovoltaic production level, up to 15% improvement in yields thanks to cell cooling.

The panels are superimposed so as to ensure heat exchange on both sides, and the resale of non-consumed surplus is possible.

Li-Mithra offers a range of heat pumps from 2.4 kW to 20 kW with variable speed compressor to meet the heat needs (Heating, Domestic Hot Water, Pool) and cooling of individuals, communities, industrial.

For installations with more than 20 kW thermal, the heat pumps are connected in parallel on 1 or 2 balloons. They synchronize autonomously via an IP network. As an option, a boiler manager can be connected to the IP network of the PACs in order to transmit the heating / cooling instructions and to retrieve the operating data.

Product designed and manufactured in France by Li-Mithra Engineering

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