Marseille, France

New built private collective housing: collective hot water production by solar heat pump

Key facts

Building
Location: Marseille, France
Construction: 2015
DHW production: collective heat pump
Heated area: 2833 m² living
Level of insulation: BBC-Effinergie label

Heat pump and source
Number of: 2
Installed power: 2 x 12kW
Operation mode: DHW only
Heat source: unglazed solar panels 100 m²

Domestic hot water
Type of system: central
Max. temperature: 60 °C
Hot water storage: 2 x 2000 l

Other information
Annual COP: 3.63
Renewables part: 70%
Electrical part of HP: 27%
Electrical back-up: 3%

This new built private housing is located in Marseille, in South-East of France. Climate and sunshine are very favorable to the installation of a “solar heat pump”, which means that the cold source consists of unglazed solar panels installed on the building roof.
Soissons, France, Technical details

Description of the technical concept

The system consists of:

- 2 x 12 kW Brine/Water heat pump Solerpac®
- 2 storage tanks with a 2000 liters capacity each
- 100 m² unglazed solar panels

Heliopac® is a domestic hot water production technology for collective applications. It uses specific solar panels able to collect energy from both sun and air.

Here, heat is collected on the roof by 100 m² unglazed solar panels. Brine heated in these panels is sent in the evaporators of the heap pumps.