

Title (en)  
HYBRID-DRIVEN COLD/HEAT STORAGE TYPE HEAT PUMP UNIT UTILIZING SOLAR PHOTOVOLTAIC POWER AND COMMERCIAL POWER

Title (de)  
WÄRMEPUMPENEINHEIT MIT HYBRIDANTRIEB UND KALT-/WARMSPEICHERUNG FÜR DEN EINSATZ IN DER PHOTOVOLTAIK UND KOMMERZIELLEN EINSATZ

Title (fr)  
UNITE DE POMPE A CHALEUR DE TYPE A ACCUMULATION FROID / CHAUD A ENTRAINEMENT HYBRIDE UTILISANT UNE ALIMENTATION PHOTOVOLTAIQUE SOLAIRE ET UNE ALIMENTATION COMMERCIALE

Publication  
**EP 2388540 A1 20111123 (EN)**

Application  
**EP 10731055 A 20100115**

Priority  
• CN 2010070200 W 20100115  
• CN 200910076400 A 20090115

Abstract (en)  
A hybrid-driven cold/heat storage type heat pump unit utilizing a solar photovoltaic power and a commercial power, which has a DC compressor (2) and an AC compressor (8), is a dual supply heat pump system driven by a solar photovoltaic DC power and a common commercial AC power in combination. When there is sunshine, the DC generated by a solar cell panel (60) is used for driving the DC compressor (2) directly to produce cold and heat capacity, and the produced cold and heat capacity could be stored respectively in a phase-change cold storage medium (39) and a phase-change heat storage medium (20). When the DC power is insufficient, the AC power from power network is used for power supply.

IPC 8 full level  
**F25B 30/02** (2006.01); **F25B 27/00** (2006.01); **F25B 29/00** (2006.01); **F25B 31/00** (2006.01)

CPC (source: EP US)  
**F25B 27/005** (2013.01 - EP US); **F25B 29/003** (2013.01 - EP US); **F25B 2400/075** (2013.01 - EP US); **F25B 2400/24** (2013.01 - EP US); **F25B 2700/1931** (2013.01 - EP US); **F25B 2700/1933** (2013.01 - EP US); **F25B 2700/2111** (2013.01 - EP US)

Cited by  
FR3072161A1; ES2902039A1; FR3117195A1; AU2015296894B2; WO2020254839A1; WO2019073177A1; WO2022117959A1; WO2016015098A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2388540 A1 20111123**; **EP 2388540 A4 20130731**; AU 2010205984 A1 20110714; CN 101458005 A 20090617; CN 101458005 B 20100901; US 2011296865 A1 20111208; WO 2010081421 A1 20100722

DOCDB simple family (application)  
**EP 10731055 A 20100115**; AU 2010205984 A 20100115; CN 200910076400 A 20090115; CN 2010070200 W 20100115; US 201013142452 A 20100115