

Title (en)  
HEAT PUMP HOT WATER SUPPLY DEVICE

Title (de)  
HEISSWASSERZUFUHRVORRICHTUNG FÜR WÄRMEPUMPE

Title (fr)  
DISPOSITIF D ALIMENTATION EN EAU CHAUDE D UNE POMPE A CHALEUR

Publication  
**EP 1972862 A4 20130911 (EN)**

Application  
**EP 06832949 A 20061120**

Priority  
• JP 2006323099 W 20061120  
• JP 2005378539 A 20051228

Abstract (en)  
[origin: EP1972862A1] The heat pump water heater comprises a CO<sub>2</sub> cycle 1 in which CO<sub>2</sub> refrigerant circulates, a R410A cycle 2 in which R410A refrigerant circulates, and a water heat exchanger 32 for conducting heat exchange between the CO<sub>2</sub> refrigerant and/or the R410A refrigerant and water, wherein the R410A cycle 2 includes a circulation path 20 passing through the water heat exchanger 32, a circulation path 40 passing through a indoor air heat exchanger 4 that conducts heat exchange between the R410A refrigerant and indoor air, and a four-way valve 24 for switching the circulating direction of the R410A refrigerant in the present R410A cycle 2 to provide heat pump water heater, capable of using a heat pump cycle for supplying hot water in cooling and heating (air-conditioning). And also, to obtain a sufficient temperature and an amount of the hot water supply when the heat pump water heater simultaneously conducts heating and supplying hot water.

IPC 8 full level  
**F24H 1/00** (2006.01); **F24H 9/00** (2006.01); **F25B 1/00** (2006.01)

CPC (source: EP)  
**F24D 17/02** (2013.01); **F25B 9/008** (2013.01); **F25B 13/00** (2013.01); **F25B 2309/061** (2013.01); **F25B 2313/003** (2013.01); **F25B 2313/0213** (2013.01); **F25B 2313/02741** (2013.01); **F25B 2400/06** (2013.01)

Citation (search report)  
• [XP] AU 2005258416 A1 20060112 - DAIKIN IND LTD  
• [XDAY] JP 2005180742 A 20050707 - HITACHI LTD, et al  
• [YDA] JP 2005083585 A 20050331 - MITSUBISHI ELECTRIC CORP  
• See references of WO 2007077687A1

Cited by  
EP2532981A3

Designated contracting state (EPC)  
DE ES FR IT SE

DOCDB simple family (publication)  
**EP 1972862 A1 20080924**; **EP 1972862 A4 20130911**; **EP 1972862 B1 20151021**; CN 101346592 A 20090114; CN 101346592 B 20110803; JP 2007178088 A 20070712; JP 3966889 B2 20070829; WO 2007077687 A1 20070712

DOCDB simple family (application)  
**EP 06832949 A 20061120**; CN 200680049376 A 20061120; JP 2005378539 A 20051228; JP 2006323099 W 20061120