

Title (en)
HEAT PUMP TYPE WATER HEATER

Title (de)
WÄRMEPUMPENDURCHLAUFERHITZER

Title (fr)
CHAUFFE-EAU DU TYPE POMPE A CHALEUR

Publication
EP 2375195 B1 20190515 (EN)

Application
EP 09836198 A 20090630

Priority
• JP 2009061944 W 20090630
• JP 2009000180 A 20090105

Abstract (en)
[origin: EP2375195A1] A heat pump water heater in which the number of components is small, a measure against drain pan freezing is realized with a simple structure, and a drain reservoir is difficult to be generated in the drain pan is obtained. This heat pump water heater is provided with a refrigerating cycle in which a compressor 1, a four-way valve 2 that switches a flow direction of a refrigerant, a water heat exchanger 3 that exchanges heat between the refrigerant and water, an expansion valve 4 that adjusts and decompresses a flow rate of the refrigerant, and an air heat exchanger 5 that exchanges heat between air and the refrigerant are connected sequentially by a refrigerant pipeline, a water circuit in which the water heat exchanger 3, a hot water tank 7 which reserves water heated by the water heat exchanger 3, and a pump 11 are connected sequentially, and a three-way valve 12 disposed between the pump 11 and the water heat exchanger 3 so that a water circuit flows to a lower-stage path 5a of the air heat exchanger and returns to the water heat exchanger 3, and a control portion that switches the three-way valve 12 of the water circuit so that high-temperature water in the hot water tank flows to the lower-stage path 5a of the air heat exchanger during defrosting operation is disposed.

IPC 8 full level
F25B 47/02 (2006.01); **F24H 4/04** (2006.01); **F25B 30/02** (2006.01); **F25B 47/00** (2006.01); **F28F 17/00** (2006.01)

CPC (source: EP US)
F24H 4/04 (2013.01 - EP US); **F25B 30/02** (2013.01 - EP US); **F25B 47/006** (2013.01 - EP US); **F25B 47/022** (2013.01 - EP US); **F25B 2339/047** (2013.01 - EP US)

Cited by
CN105674559A; CN104501403A; EP4137751A4; EP3012551A4; CN105783356A; CN105135747A; CN103216970A; CN105757827A; GB2497171A; GB2497171B; WO2016059536A1; EP2959230B1

Designated contracting state (EPC)
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DOCDB simple family (publication)
EP 2375195 A1 20111012; **EP 2375195 A4 20160824**; **EP 2375195 B1 20190515**; JP 2010156523 A 20100715; JP 5713536 B2 20150507; US 2011214444 A1 20110908; WO 2010076858 A1 20100708

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