

Title (en)  
HEAT PUMP DEVICE

Title (de)  
WÄRMEPUMPENVORRICHTUNG

Title (fr)  
DISPOSITIF DE POMPE À CHALEUR

Publication  
**EP 2759787 A1 20140730 (EN)**

Application  
**EP 12832013 A 20120131**

Priority  
• JP 2011199537 A 20110913  
• JP 2012000595 W 20120131

Abstract (en)

In a heat pump apparatus of an indirect type including a primary circuit on a heat source side and a secondary circuit on a load side, a refrigerant in the primary circuit is prevented from leaking through the secondary circuit. An air-conditioning apparatus 100 includes a leakage detecting device 13 that detects leakage of the refrigerant circulated through a refrigerant circuit, serving as the primary circuit, from an intermediate heat exchanger 5 into a water circuit 10, serving as the secondary circuit, and a controller 14 that closes valves 8a and 8b arranged on both sides of the intermediate heat exchanger 5 in the water circuit 10 to prevent water containing the refrigerant from flowing beyond the valves 8a and 8b when the leakage detecting device 13 detects the leakage.

IPC 8 full level  
**F24F 1/26** (2011.01); **F25B 49/02** (2006.01)

CPC (source: EP US)

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**F25B 39/00** (2013.01 - EP US); **F25B 49/005** (2013.01 - EP US); **F25B 49/02** (2013.01 - EP US); **F24F 11/36** (2017.12 - EP US);  
**F25B 2313/003** (2013.01 - EP US); **F25B 2400/06** (2013.01 - EP US); **F25B 2400/12** (2013.01 - EP US); **F25B 2500/18** (2013.01 - EP US);  
**F25B 2500/222** (2013.01 - EP US)

Cited by  
EP3822545A1; EP3336453A4; EP3869113A1; EP3591312A4; EP3358273A4; EP3467399A4; CN110073152A; EP3789690A4; US11162725B2;  
US11118821B2; US11293672B2; EP3809066A4; WO2021160221A1; EP3647687A4; EP3800263A1; EP4148330A1; CN110199162A;  
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DOCDB simple family (publication)

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