

Title (en)  
HEAT PUMP-TYPE HEATING DEVICE

Title (de)  
ERWÄRMUNGSVORRICHTUNG MIT EINER WÄRMEPUMPE

Title (fr)  
DISPOSITIF DE CHAUFFAGE DU TYPE POMPE À CHALEUR

Publication  
**EP 2933583 A1 20151021 (EN)**

Application  
**EP 13862867 A 20131125**

Priority  
• JP 2012273479 A 20121214  
• JP 2013081612 W 20131125

Abstract (en)  
A heat pump-type heating device includes an indoor heat exchanger (26), a low-pressure side compressor (31), a high-pressure side compressor (32), a first decompressor (36) configured to decompress the refrigerant delivered from the indoor heat exchanger (26), a gas-liquid separator (38) configured to separate the refrigerant delivered from the first decompressor (36) into a gas phase and a liquid phase, a second decompressor (37) connected to the liquid-phase side of the gas-liquid separator (38) and configured to decompress the refrigerant delivered from the gas-liquid separator (38) and deliver the decompressed refrigerant to an outdoor heat exchanger (27), an injection pipeline (51) connected to the gas-phase side of the gas-liquid separator (38) and configured to guide the refrigerant delivered from the gas-liquid separator (38) to a pipeline between the low-pressure side compressor (31) and the high-pressure side compressor (32), and a control unit (46) configured to control a decompression ratio of the refrigerant in the second decompressor (37) so as to render the refrigerant that flows into the high-pressure side compressor (32) into a superheated gas state or a saturated vapor state. Provided with such configuration, it is expected to sufficiently improve the heating ability of the heat pump-type heating device.

IPC 8 full level  
**F25B 1/00** (2006.01); **F25B 1/10** (2006.01); **F25B 30/02** (2006.01)

CPC (source: EP)  
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Cited by  
CN106352585A; EP3306238A1; US11959669B2; US10876778B2; WO2017175014A1

Designated contracting state (EPC)  
AL 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 RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
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