

Title (en)  
AIR CONDITIONER DEVICE

Title (de)  
KLIMAANLAGE

Title (fr)  
DISPOSITIF DE CONDITIONNEMENT D'AIR

Publication  
**EP 2669598 B1 20190522 (EN)**

Application  
**EP 11856898 A 20110126**

Priority  
JP 2011000406 W 20110126

Abstract (en)  
[origin: US2013213078A1] Obtained is an air-conditioning apparatus capable of having a thin low-pressure gas pipe even when a refrigerant with a low refrigerant density at low pressure is used. An air-conditioning apparatus includes a refrigerant circuit connecting a compressor, a heat source side heat exchanger, expansion devices, and use side heat exchangers with pipes and circulating a refrigerant whose density in a saturated refrigerant gas at 0 degrees C. is 35 to 65% of the density of an R410A refrigerant, and supercooling means (supercooling heat exchanger, expansion device, and bypass) making a liquid temperature sent from the heat source side heat exchanger to the expansion devices be 5 degrees C. or less in a cooling operation.

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

CPC (source: EP US)  
**F25B 1/00** (2013.01 - US); **F25B 9/002** (2013.01 - EP US); **F25B 40/02** (2013.01 - EP US); **F25B 7/00** (2013.01 - EP US); **F25B 13/00** (2013.01 - EP US); **F25B 2313/0233** (2013.01 - EP US); **F25B 2313/0254** (2013.01 - EP US); **F25B 2313/02741** (2013.01 - EP US); **F25B 2400/121** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US)

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DOCDB simple family (publication)  
**US 2013213078 A1 20130822**; AU 2011357097 A1 20130620; AU 2011357097 B2 20150122; CN 103229004 A 20130731; CN 103229004 B 20160504; EP 2669598 A1 20131204; EP 2669598 A4 20161207; EP 2669598 B1 20190522; JP WO2012101672 A1 20140630; WO 2012101672 A1 20120802

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