

Title (en)  
AIR CONDITIONER

Title (de)  
KLIMAANLAGE

Title (fr)  
CLIMATISEUR

Publication  
**EP 3690349 A4 20201014 (EN)**

Application  
**EP 17927771 A 20170928**

Priority  
JP 2017035261 W 20170928

Abstract (en)  
[origin: EP3690349A1] An air-conditioning apparatus includes a refrigerant circuit in which an outdoor unit, at least one load-side expansion device, and at least one load-side heat exchanger are connected by pipes to allow refrigerant to circulate. The outdoor unit includes a compressor including an injection port allowing the refrigerant to flow into a suction chamber, a heat-source-side heat exchanger for heat exchange for the refrigerant, and an accumulator. The load-side heat exchanger transfers heat between a load and the refrigerant. The outdoor unit includes: an injection pipe having one end connected between the heat-source-side heat exchanger and the load-side expansion device, and the other end connected to the injection port, in the refrigerant circuit; an outdoor-side expansion device located downstream from the one end of the injection pipe in the flow of the refrigerant from the load-side expansion device to the heat-source-side heat exchanger; and an injection expansion device that adjusts the amount of the refrigerant flowing through the injection pipe. Also, a controller is provided to control the opening degrees of the outdoor-side expansion device and the injection expansion device.

IPC 8 full level  
**F25B 1/00** (2006.01); **F25B 13/00** (2006.01)

CPC (source: EP US)  
**F25B 1/00** (2013.01 - EP); **F25B 13/00** (2013.01 - EP); **F25B 41/31** (2021.01 - US); **F25B 41/40** (2021.01 - US); **F25B 49/02** (2013.01 - US); **F25B 2313/005** (2013.01 - EP US); **F25B 2313/0231** (2013.01 - EP US); **F25B 2313/0233** (2013.01 - EP); **F25B 2313/0253** (2013.01 - EP US); **F25B 2313/02741** (2013.01 - EP); **F25B 2313/0311** (2013.01 - EP); **F25B 2313/0315** (2013.01 - US); **F25B 2600/19** (2013.01 - US); **F25B 2600/2513** (2013.01 - US)

Citation (search report)  
• [IAY] WO 2014080464 A1 20140530 - MITSUBISHI ELECTRIC CORP [JP], et al  
• [IY] US 2015267957 A1 20150924 - KIM BEOMCHAN [KR], et al  
• [IAY] US 2015107290 A1 20150423 - HATOMURA TAKESHI [JP], et al  
• See references of WO 2019064441A1

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)  
**EP 3690349 A1 20200805; EP 3690349 A4 20201014; EP 3690349 B1 20231213**; CN 111133258 A 20200508; CN 111133258 B 20220118; JP 6880213 B2 20210602; JP WO2019064441 A1 20201001; US 2021055024 A1 20210225; WO 2019064441 A1 20190404

DOCDB simple family (application)  
**EP 17927771 A 20170928**; CN 201780095028 A 20170928; JP 2017035261 W 20170928; JP 2019545501 A 20170928; US 201716643332 A 20170928