

Title (en)
Air conditioner

Title (de)
Klimaanlage

Title (fr)
Climatiseur

Publication
EP 2339269 A3 20110713 (EN)

Application
EP 10252001 A 20101125

Priority
JP 2009293650 A 20091225

Abstract (en)
[origin: EP2339269A2] In an air conditioner having a double-pipe heat exchanger in a refrigerating cycle, the degree of opening of a bypass expansion valve is controlled easily without liquid return to a compressor and without considering the state of a low-pressure two-phase refrigerant in the double-pipe heat exchanger. In the air conditioner including a refrigerating cycle 1A in which a heating expansion valve 51 is provided between the outdoor heat exchanger 30 and the double-pipe heat exchanger 60; a cooling expansion valve 52 is provided between the indoor heat exchanger 40 and the double-pipe heat exchanger 60; and in the double-pipe heat exchanger 60, a high-pressure liquid refrigerant flowing in a liquid-side refrigerant pipe 50 is heat-exchanged with a low-pressure two-phase refrigerant that is formed by decompressing some of the high-pressure liquid refrigerant by a bypass expansion valve 62, a low-pressure refrigerant outflow portion 60a of the double-pipe heat exchanger 60 is connected to a refrigerant pipe portion 50a between the outdoor heat exchanger 30 and the heating expansion valve 51 via a first check valve 71, and is connected to a refrigerant pipe portion 50b between the indoor heat exchanger 40 and the cooling expansion valve 52 via a second check valve 72.

IPC 8 full level
F25B 13/00 (2006.01); **F25B 40/02** (2006.01)

CPC (source: EP US)
F25B 13/00 (2013.01 - EP US); **F25B 40/02** (2013.01 - EP US); **F25B 2313/02741** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US); **F25B 2600/2509** (2013.01 - EP US)

Citation (search report)
[A] EP 0855562 A1 19980729 - DAIKIN IND LTD [JP]

Cited by
CN109416204A

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 2339269 A2 20110629; EP 2339269 A3 20110713; EP 2339269 B1 20190123; AU 2010246508 A1 20110714; CN 102109202 A 20110629; CN 102109202 B 20140903; ES 2715928 T3 20190607; JP 2011133177 A 20110707; US 2011154847 A1 20110630

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EP 10252001 A 20101125; AU 2010246508 A 20101129; CN 201010622998 A 20101217; ES 10252001 T 20101125; JP 2009293650 A 20091225; US 92672410 A 20101207