

Title (en)  
Air conditioner

Title (de)  
Klimaanlage

Title (fr)  
Climatiseur

Publication  
**EP 2339269 A2 20110629 (EN)**

Application  
**EP 10252001 A 20101125**

Priority  
JP 2009293650 A 20091225

Abstract (en)  
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 (applicant)  
JP 2006023073 A 20060126 - DAIKIN IND LTD

Cited by  
CN109416204A

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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)  
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DOCDB simple family (publication)  
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