

Title (en)  
Refrigerating Cycle

Title (de)  
Kühlkreislauf

Title (fr)  
Cycle de réfrigération

Publication  
**EP 2187150 A3 20140115 (EN)**

Application  
**EP 09175357 A 20091109**

Priority  
JP 2008294844 A 20081118

Abstract (en)  
[origin: EP2187150A2] A refrigerating cycle capable of certainly and effectively suppressing an excessive increase of refrigerant temperature at a suction side of a compressor without complicating a piping system and a structure of an expansion valve is provided. A refrigerant cycle includes a compressor 101, a condenser 102, an evaporator 103, an internal heat exchanger 104, and an expansion valve 111. In the internal heat exchanger 104, a heat exchange is carried out between a high-temperature refrigerant introduced from the condenser 102 to the expansion valve 111 and a low-temperature refrigerant introduced from the evaporator 103 to the suction side of the compressor 101. In order to detect temperature and/or pressure of a low-temperature refrigerant introduced toward the suction side of the compressor 101 after carrying out the heat exchange in the internal heat exchanger 104, a temperature-sensitive cylinder 70 and/or an external pressure introduction pipe 50 are additionally provided at the expansion valve 111. In the expansion valve 111, a flowing rate of a refrigerant introduced to the evaporator 103 is adjusted responding to temperature and/or pressure of a low-temperature refrigerant after the heat exchange.

IPC 8 full level  
**F25B 41/06** (2006.01); **F25B 40/00** (2006.01)

CPC (source: EP US)  
**F25B 40/00** (2013.01 - EP US); **F25B 41/335** (2021.01 - EP US); **F25B 2309/061** (2013.01 - EP); **F25B 2341/0683** (2013.01 - EP); **F25B 2700/21151** (2013.01 - EP)

Citation (search report)

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Designated contracting state (EPC)  
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 SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2187150 A2 20100519; EP 2187150 A3 20140115**; CN 101737987 A 20100616; JP 2010121831 A 20100603

DOCDB simple family (application)  
**EP 09175357 A 20091109**; CN 200910226504 A 20091118; JP 2008294844 A 20081118