

Title (en)

OUTDOOR UNIT AND REFRIGERATION CYCLE DEVICE

Title (de)

AUSSENENHEIT UND KÜHLZYKLUSVORRICHTUNG

Title (fr)

UNITÉ EXTERNE ET DISPOSITIF À CYCLE FRIGORIFIQUE

Publication

**EP 4130615 A1 20230208 (EN)**

Application

**EP 20927414 A 20200327**

Priority

JP 2020014278 W 20200327

Abstract (en)

A refrigeration cycle apparatus (1) includes a load device (3) and an outdoor unit (2). The outdoor unit (2) includes a compressor (10), a condenser (20), a heat exchanger (30), a second expansion valve (40), the second expansion valve (40), an injection flow path (101) configured to cause refrigerant to flow from a pipe (81) between an outlet of the condenser (20) and an inlet of a first passage (H1) to the compressor (10), a controller (100), and a notification device (150). The injection flow path (101) is provided with a first refrigerant flow path (91 to 94), a second refrigerant flow path (96), a receiver (73), a third expansion valve (71), and a flow rate control valve (72). When a supercritical state is reached where a discharge pressure of the compressor (10) exceeds a critical pressure of the refrigerant, the controller (100) determines whether or not the refrigerant is insufficient, based on a degree of opening of the flow rate control valve (72).

IPC 8 full level

**F25B 49/02** (2006.01); **F25B 1/00** (2006.01)

CPC (source: EP)

**F25B 41/39** (2021.01); **F25B 45/00** (2013.01); **F25B 49/02** (2013.01); **F25B 2400/04** (2013.01); **F25B 2400/23** (2013.01);  
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**F25B 2700/21151** (2013.01); **F25B 2700/21152** (2013.01); **F25B 2700/21162** (2013.01); **F25B 2700/21163** (2013.01)

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

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DOCDB simple family (application)

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