

Title (en)  
OUTDOOR UNIT AND REFRIGERATION CYCLE DEVICE

Title (de)  
AUSSENEINHEIT UND KÜHLZYKLUSVORRICHTUNG

Title (fr)  
UNITÉ EXTÉRIEURE ET DISPOSITIF À CYCLE FRIGORIFIQUE

Publication  
**EP 4030116 A4 20220907 (EN)**

Application  
**EP 19944704 A 20190909**

Priority  
JP 2019035373 W 20190909

Abstract (en)  
[origin: EP4030116A1] An outdoor unit (2) includes: a first flow path (F1); a second flow path (F2); a second expansion device (71), a receiver (73), and a flow rate control valve (72) disposed on the second flow path (F2) in order from a branch point; a heat exchanger (30); and a controller (100). The heat exchanger (30) exchanges heat between refrigerant flowing in a first passage (H1) and the refrigerant flowing in a second passage (H2). When a pump down operation for recovering the refrigerant to the receiver (73) is started, the controller (100) is configured to control a control state of a compressor (10) and the flow rate control valve (72), at a first time point, to a first state in which the flow rate control valve (72) is closed while the compressor (10) is operated. During the pump down operation, the controller (100) is configured to transition, at a second time point after the first time point, the control state from the first state to a second state in which the flow rate control valve (72) is opened while the compressor (10) is operated.

IPC 8 full level  
**F25B 1/00** (2006.01); **F25B 40/00** (2006.01)

CPC (source: EP)  
**F25B 40/00** (2013.01); **F25B 2400/13** (2013.01); **F25B 2400/19** (2013.01); **F25B 2400/23** (2013.01); **F25B 2600/23** (2013.01); **F25B 2600/25** (2013.01); **F25B 2700/1931** (2013.01); **F25B 2700/1933** (2013.01)

Citation (search report)

- [X] US 2015338121 A1 20151126 - YAMASHITA KOJI [JP]
- [X] WO 2008130357 A1 20081030 - CARRIER CORP [US], et al
- See references of WO 2021048901A1

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 4030116 A1 20220720**; **EP 4030116 A4 20220907**; **EP 4030116 B1 20231011**; CN 114341567 A 20220412; CN 114341567 B 20240102; DK 4030116 T3 20231113; ES 2964488 T3 20240408; FI 4030116 T3 20231102; JP 7224480 B2 20230217; JP WO2021048901 A1 20210318; WO 2021048901 A1 20210318

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**EP 19944704 A 20190909**; CN 201980099962 A 20190909; DK 19944704 T 20190909; ES 19944704 T 20190909; FI 19944704 T 20190909; JP 2019035373 W 20190909; JP 2021544990 A 20190909