

Title (en)
REFRIGERATION CYCLE DEVICE

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication
EP 4053470 A4 20221116 (EN)

Application
EP 19950515 A 20191101

Priority
JP 2019043094 W 20191101

Abstract (en)
[origin: EP4053470A1] In a refrigeration cycle apparatus (100), a refrigerant circulates in order from a compressor (1), a first heat exchanger (2), a second heat exchanger (3), a first expansion valve (5), and a third heat exchanger (4). The refrigeration cycle apparatus (100) includes a receiver (8), a second expansion valve (6), a first flow passage (FP1), a second flow passage (FP2), a vent tube (9), and a third expansion valve (7). The second expansion valve (6) is connected to a second port (P72). The first flow passage (FP1) connects the second expansion valve (6) to the compressor (1) via the second heat exchanger (3). The second flow passage (FP2) connects the first heat exchanger (2) to the second heat exchanger (3). The vent tube (9) connects a third port (P73) to a portion of the first flow passage (FP1) between the second expansion valve (6) and the second heat exchanger (3). The third expansion valve (7) is connected between the second flow passage (FP2) and a first port (P71).

IPC 8 full level
F25B 1/00 (2006.01)

CPC (source: CN EP)
F25B 1/005 (2013.01 - CN); **F25B 40/00** (2013.01 - EP); **F25B 41/31** (2021.01 - CN); **F25B 41/40** (2021.01 - CN); **F25B 49/02** (2013.01 - EP); **F25B 2400/13** (2013.01 - EP); **F25B 2400/23** (2013.01 - EP); **F25B 2700/1931** (2013.01 - EP); **F25B 2700/1933** (2013.01 - EP); **F25B 2700/21151** (2013.01 - EP); **F25B 2700/21152** (2013.01 - EP)

Citation (search report)
[X] JP 2010127531 A 20100610 - MITSUBISHI ELECTRIC CORP

Cited by
WO2024102371A1

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)
EP 4053470 A1 20220907; **EP 4053470 A4 20221116**; CN 114585866 A 20220603; CN 117329723 A 20240102; JP 2024023437 A 20240221; JP WO2021084743 A1 20210506; WO 2021084743 A1 20210506

DOCDB simple family (application)
EP 19950515 A 20191101; CN 201980101418 A 20191101; CN 202311470009 A 20191101; JP 2019043094 W 20191101; JP 2021554030 A 20191101; JP 2023201534 A 20231129