

Title (en)  
REFRIGERATION CYCLE DEVICE

Title (de)  
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)  
DISPOSITIF À CYCLE FRIGORIFIQUE

Publication  
**EP 3246637 B1 20210616 (EN)**

Application  
**EP 15877851 A 20150116**

Priority  
JP 2015051068 W 20150116

Abstract (en)  
[origin: EP3246637A1] There are included: a main circuit 30 in which a compressor 1, a condenser 3, a main expansion valve 4, and an evaporator 5 are connected in a circle, and through which refrigerant having a higher boiling point than R407C circulates; a bypass 40 (a discharged gas bypass 6 and a suction bypass 8) configured to combine a flow of part of refrigerant discharged from the compressor 1 and a flow of refrigerant having flowed out of the condenser 3 into a combined flow to allow the combined flow to flow into a suction side of the compressor 1; a negative pressure regulating valve (a discharged gas bypass valve 7) configured to regulate a flow rate in the bypass 40; and a negative pressure prevention control unit 20a configured to perform a negative pressure prevention operation of controlling the negative pressure regulating valve 7 to prevent a suction pressure of the compressor 1 from becoming negative.

IPC 8 full level  
**F25B 1/00** (2006.01); **F25B 13/00** (2006.01); **F25B 29/00** (2006.01); **F25B 47/02** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP US)  
**F25B 13/00** (2013.01 - EP US); **F25B 47/025** (2013.01 - EP); **F25B 49/02** (2013.01 - EP); **F25B 2339/047** (2013.01 - EP); **F25B 2341/0011** (2013.01 - EP); **F25B 2400/04** (2013.01 - EP); **F25B 2400/0403** (2013.01 - EP); **F25B 2400/0409** (2013.01 - EP); **F25B 2500/19** (2013.01 - EP); **F25B 2600/0272** (2013.01 - EP); **F25B 2600/2501** (2013.01 - EP); **F25B 2700/1933** (2013.01 - EP); **F25B 2700/21151** (2013.01 - EP)

Cited by  
EP4006441A4; EP3693686A3; US11378315B2

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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