

Title (en)  
REFRIGERATION APPARATUS

Title (de)  
KÜHLVORRICHTUNG

Title (fr)  
APPAREIL DE RÉFRIGÉRATION

Publication  
**EP 3290825 A1 20180307 (EN)**

Application  
**EP 16786103 A 20160330**

Priority  
• JP 2015092150 A 20150428  
• JP 2016001846 W 20160330

Abstract (en)  
A control section (13) performs first and second degree-of-opening adjusting operations in a cooling mode. In the first degree-of-opening adjusting operation, the control section (13) adjusts the degree of opening of an intermediate expansion valve (36a, 36b, 36c) such that the temperature (Td) of a refrigerant discharged from a compressor (31 a, 31b, 31c) is below a higher discharged refrigerant temperature threshold (Tdth). In the second degree-of-opening adjusting operation, the control section (13) adjusts the degree of opening of a supercooling expansion valve (35) such that the temperature of a refrigerant flowing through a portion of an injection pipe (54) between a supercooling heat exchanger (34) and the intermediate expansion valve (36a, 36b, 36c) is above a freezing temperature threshold (Tfth).

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

CPC (source: EP)  
**F25B 1/00** (2013.01); **F25B 31/004** (2013.01); **F25B 40/02** (2013.01); **F25B 49/02** (2013.01); **F25B 2500/31** (2013.01); **F25B 2600/2509** (2013.01); **F25B 2700/2101** (2013.01); **F25B 2700/21152** (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

DOCDB simple family (publication)  
**EP 3290825 A1 20180307**; **EP 3290825 A4 20181219**; **EP 3290825 B1 20210519**; ES 2879920 T3 20211123; JP 2016205792 A 20161208; JP 5971377 B1 20160817; WO 2016174822 A1 20161103

DOCDB simple family (application)  
**EP 16786103 A 20160330**; ES 16786103 T 20160330; JP 2015092150 A 20150428; JP 2016001846 W 20160330