

Title (en)  
REFRIGERATION APPARATUS

Title (de)  
KÜHLVORRICHTUNG

Title (fr)  
APPAREIL DE RÉFRIGÉRATION

Publication  
**EP 3290825 A4 20181219 (EN)**

Application  
**EP 16786103 A 20160330**

Priority  
• JP 2015092150 A 20150428  
• JP 2016001846 W 20160330

Abstract (en)  
[origin: EP3290825A1] 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); **F25B 31/00** (2006.01); **F25B 40/02** (2006.01); **F25B 49/02** (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)

Citation (search report)  
• [XA] WO 2015029220 A1 20150305 - MITSUBISHI ELECTRIC CORP [JP]  
• [A] EP 2505941 A1 20121003 - DAIKIN IND LTD [JP]  
• [A] EP 2105685 A1 20090930 - DAIKIN IND LTD [JP]  
• [A] EP 2863147 A1 20150422 - MITSUBISHI ELECTRIC CORP [JP]  
• See references of WO 2016174822A1

Designated contracting state (EPC)  
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**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

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