

Title (en)  
HEAT SOURCE APPARATUS

Title (de)  
WÄRMEQUELLENVORRICHTUNG

Title (fr)  
APPAREIL DE SOURCE DE CHALEUR

Publication  
**EP 3315875 A4 20180516 (EN)**

Application  
**EP 15896330 A 20150624**

Priority  
JP 2015068247 W 20150624

Abstract (en)  
[origin: EP3315875A1] A heat source apparatus including: a compressor; an air-cooled heat exchanger; a load-side heat exchanger configured to exchange heat between a heat medium which flows through a load, and refrigerant; and a main expansion valve which is connected between the air-cooled heat exchanger and the load-side heat exchanger, and has a function of being fully closed when stoppage of power supply from a power supply source is detected, includes a refrigerant flow control circuit connected in parallel to the main expansion valve. The refrigerant flow control circuit includes a first sub-expansion valve configured to regulate a flow rate of the refrigerant, a refrigerant tank configured to store the refrigerant, and a second sub-expansion valve configured to regulate the flow rate of the refrigerant, which are connected in series with one another.

IPC 8 full level  
**F25B 1/00** (2006.01); **F25B 13/00** (2006.01); **F25B 41/04** (2006.01); **F25B 43/00** (2006.01); **F25B 47/02** (2006.01); **F25B 49/00** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP US)  
**F25B 13/00** (2013.01 - EP); **F25B 41/24** (2021.01 - EP US); **F25B 43/00** (2013.01 - EP); **F25B 47/025** (2013.01 - EP); **F25B 49/005** (2013.01 - EP); **F25B 49/02** (2013.01 - EP US); **F25B 2313/02741** (2013.01 - EP); **F25B 2313/029** (2013.01 - EP); **F25B 2400/0411** (2013.01 - EP); **F25B 2400/16** (2013.01 - EP); **F25B 2500/27** (2013.01 - EP); **F25B 2600/2501** (2013.01 - EP); **F25B 2600/2513** (2013.01 - EP)

Citation (search report)

- [A] JP 2014119154 A 20140630 - SHARP KK
- [A] JP 2009156531 A 20090716 - MITSUBISHI ELECTRIC CORP
- [A] JP H08200858 A 19960806 - TOYO SEISAKUSHO KK
- See references of WO 2016208008A1

Cited by  
CN114680360A; EP4276384A4; EP3361185B1

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 3315875 A1 20180502; EP 3315875 A4 20180516; EP 3315875 B1 20190213**; JP 6403885 B2 20181010; JP WO2016208008 A1 20171221; WO 2016208008 A1 20161229

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**EP 15896330 A 20150624**; JP 2015068247 W 20150624; JP 2017524502 A 20150624