

Title (en)
Refrigerant circuit system

Title (de)
Kühlmittelkreislaufsystem

Title (fr)
Système de circuit réfrigérant

Publication
EP 2565562 A3 20170419 (EN)

Application
EP 12182123 A 20120829

Priority
JP 2011190129 A 20110831

Abstract (en)
[origin: EP2565562A2] It is an object of the present invention to provide a refrigerant circuit system in which the volume of a plurality of accumulators provided in series and the size of an oil return hole are appropriately set so as to achieve both the prevention of liquid backflow and the prevention of oil discharge from a compressor caused by deteriorated oil return. The refrigerant circuit system includes: a compressor 9 having a refrigerant suction pipe 20B; a first accumulator 18; and a second accumulator 19, the first accumulator 18 and the second accumulator 19 being provided in series inside the refrigerant suction pipe 20B of the compressor 9 along a refrigerant circulation direction, wherein the first accumulator 18 and the second accumulator 19 are adapted to satisfy $V_1 > V_2$ where V_1 is a volume of the first accumulator 18 and V_2 is a volume of the second accumulator 19, and wherein the first accumulator 18 and the second accumulator 19 are also adapted to satisfy $A_1 < A_2$ where A_1 is an opening area of a first oil return hole 37 provided in a refrigerant exit pipe 36 of the first accumulator 18 and A_2 is an opening area of a second oil return hole 41 provided in a refrigerant exit pipe 40 of the second accumulator 19.

IPC 8 full level
F25B 43/00 (2006.01); **F25B 31/00** (2006.01)

CPC (source: EP)
F25B 31/004 (2013.01); **F25B 43/006** (2013.01); **F25B 1/10** (2013.01); **F25B 2400/13** (2013.01); **F25B 2400/23** (2013.01);
F25B 2500/01 (2013.01)

Citation (search report)
• [YDA] JP 2011047545 A 20110310 - PANASONIC CORP
• [Y] JP S6127074 U 19860218
• [A] JP H02298770 A 19901211 - DAIKIN IND LTD
• [A] JP S61128075 A 19860616 - TOSHIBA CORP
• [A] EP 0339267 A2 19891102 - MITSUBISHI ELECTRIC CORP [JP]

Cited by
US11953246B2; CN112747501A

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 2565562 A2 20130306; EP 2565562 A3 20170419; EP 2565562 B1 20180926; JP 2013053757 A 20130321

DOCDB simple family (application)
EP 12182123 A 20120829; JP 2011190129 A 20110831