

Title (en)
HEAT PUMP DEVICE

Title (de)
WÄRMEPUMPENVORRICHTUNG

Title (fr)
DISPOSITIF DE POMPE À CHALEUR

Publication
EP 3009767 A1 20160420 (EN)

Application
EP 13886812 A 20130613

Priority
JP 2013066313 W 20130613

Abstract (en)
The present invention has an object to improve a COP of a heat pump device including a compressor having a first discharge passage and a second discharge passage, a mass flow rate of refrigerant oil discharged together with refrigerant from the first discharge passage being higher than a mass flow rate of the refrigerant oil discharged together with the refrigerant from the second discharge passage. The heat pump device according to the present invention includes: the compressor in which the mass flow rate of the refrigerant oil discharged from the first discharge passage is higher than the mass flow rate of the refrigerant oil discharged from the second discharge passage; a first heat exchanger including a first refrigerant heat transfer channel through which the refrigerant and the refrigerant oil discharged from the first discharge passage pass, and a first liquid heat transfer channel through which a liquid passes; and a second heat exchanger including a second refrigerant heat transfer channel through which the refrigerant and the refrigerant oil discharged from the second discharge passage pass, and a second liquid heat transfer channel through which the liquid passes, a total sectional area of the first refrigerant heat transfer channel being larger than a total sectional area of the second refrigerant heat transfer channel.

IPC 8 full level
F25B 6/04 (2006.01); **F04B 39/06** (2006.01); **F04C 23/00** (2006.01); **F04C 29/04** (2006.01); **F25B 30/02** (2006.01); **F25B 40/00** (2006.01); **F28D 7/02** (2006.01)

CPC (source: EP)
F04B 39/06 (2013.01); **F04C 23/008** (2013.01); **F25B 30/02** (2013.01); **F25B 40/00** (2013.01); **F28D 7/0016** (2013.01); **F28D 7/0066** (2013.01); **F28D 7/024** (2013.01); **F28F 1/02** (2013.01); **F28F 1/36** (2013.01); **F25B 2339/047** (2013.01); **F25B 2400/072** (2013.01); **F28F 2275/06** (2013.01)

Cited by
EP3581868A1; EP3370026A4; EP3671049A1

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 3009767 A1 20160420; **EP 3009767 A4 20170125**; **EP 3009767 B1 20201209**; JP 6075451 B2 20170208; JP WO2014199479 A1 20170223; WO 2014199479 A1 20141218

DOCDB simple family (application)
EP 13886812 A 20130613; JP 2013066313 W 20130613; JP 2015522338 A 20130613