

Title (en)  
GAS REFRIGERANT SEPARATOR, GAS REFRIGERANT SEPARATOR-CUM-REFRIGERANT FLOW DIVIDER, EXPANSION VALVE, AND REFRIGERATION DEVICE

Title (de)  
GASKÜHLUNGSSEPARATOR, FLUSSTEILER FÜR EIN GASKÜHLUNGSSEPARATOR-KÜHLMITTEL, EXPANSIONSVENTIL UND KÜHLVORRICHTUNG

Title (fr)  
SÉPARATEUR D'AGENT FRIGORIGÈNE GAZEUX, COMBINÉ SÉPARATEUR D'AGENT FRIGORIGÈNE GAZEUX-RÉPARTITEUR DE DÉBIT, DÉTENDEUR ET DISPOSITIF FRIGORIFIQUE

Publication  
**EP 2484994 A1 20120808 (EN)**

Application  
**EP 10820405 A 20100921**

Priority

- JP 2009228947 A 20090930
- JP 2010204698 A 20100913
- JP 2010066320 W 20100921

Abstract (en)  
A gas refrigerant separator-cum-refrigerant flow divider (DR) includes an inlet chamber (10) having a circular cross section, a speed increasing chamber (20) having a circular cross section, and an outlet chamber (30) having a circular cross section, which are coaxially arranged in series. The outlet chamber (30) introduces refrigerant from a refrigerant inlet port (14) and guides and swirls the refrigerant along an inner wall surface of the outlet chamber (30). The speed increasing chamber (20) increases the speed of a swirling refrigerant flow sent from the inlet chamber (10) and jets the swirling refrigerant flow into the outlet chamber (30) through a communication port (21), which is formed at the distal end of the speed increasing chamber (20). The diameter of the outlet chamber (30) is greater than the diameter of the communication port (21) at the distal end of the speed increasing chamber (20). The gas refrigerant separator-cum-refrigerant flow divider (DR) has a gas refrigerant extracting pipe (Pg) for extracting gas refrigerant from an axial portion of the swirling refrigerant flow and a refrigerant outlet pipe (Pd) for directing the refrigerant to the exterior after extraction of the gas refrigerant.

IPC 8 full level  
**F25B 43/00** (2006.01); **F25B 41/04** (2006.01); **F25B 41/06** (2006.01)

CPC (source: EP US)  
**F25B 41/45** (2021.01 - EP US); **F25B 43/00** (2013.01 - EP US); **F25B 13/00** (2013.01 - EP US); **F25B 39/028** (2013.01 - EP US); **F25B 2400/02** (2013.01 - EP US); **F25B 2400/0409** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US); **F25B 2400/23** (2013.01 - EP US)

Citation (search report)  
See references of WO 2011040286A1

Cited by  
EP4130612A4; WO2014053585A1

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 SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2484994 A1 20120808**; AU 2010301782 A1 20120412; BR 112012006926 A2 20160607; CN 102549357 A 20120704; JP 2011094946 A 20110512; US 2012180518 A1 20120719; WO 2011040286 A1 20110407

DOCDB simple family (application)  
**EP 10820405 A 20100921**; AU 2010301782 A 20100921; BR 112012006926 A 20100921; CN 201080044757 A 20100921; JP 2010066320 W 20100921; JP 2010204698 A 20100913; US 201013498391 A 20100921