

Title (en)
Refrigerant compressor having an oil separator

Title (de)
Kältemittelkompressor mit Ölabscheider

Title (fr)
Compresseur frigorifique avec séparateur d'huile

Publication
EP 1798499 A2 20070620 (EN)

Application
EP 06025823 A 20061213

Priority
JP 2005359352 A 20051213

Abstract (en)
A refrigerant compressor (10) includes a compression mechanism, a discharge passage (49), and an oil separator (50). The compression mechanism compresses a refrigerant gas containing a lubricant oil. The refrigerant gas that has been compressed by the compression mechanism flows through the discharge passage. The oil separator (50) is arranged in the discharge passage and separates the lubricant oil from the refrigerant gas flowing in the discharge passage. The oil separator has a rotator (52) that causes the refrigerant gas to flow around the axis (M) of the rotator and a circumferential wall (51A) that encompasses the rotator and extends along the axis of the rotator. The rotator and the circumferential wall define a separation zone in between. The lubricant oil is separated from the refrigerant gas by the flow of the refrigerant gas around the rotator in the separation zone. The circumferential wall has an oil outlet that allows the separated lubricant oil to flow to the exterior of the oil separator. The oil separator has an inlet port (54A) that allows the refrigerant gas to flow into the separation zone and an outlet port (52C) that allows the refrigerant gas to flow out of the separation zone. The rotator is arranged between the inlet port and the outlet port. The inlet port and the outlet port are arranged so that an inlet direction of the refrigerant gas flowing through the inlet port is substantially parallel with an outlet direction of the refrigerant gas flowing through the outlet port.

IPC 8 full level
F25B 43/02 (2006.01); **F04B 39/16** (2006.01)

CPC (source: EP KR US)
F04B 27/0878 (2013.01 - KR); **F04B 27/1018** (2013.01 - KR); **F04B 27/1045** (2013.01 - KR); **F04B 27/1081** (2013.01 - KR);
F04B 27/109 (2013.01 - EP KR US); **F04B 39/16** (2013.01 - EP KR US); **F04C 29/026** (2013.01 - EP US); **F25B 43/02** (2013.01 - EP KR US);
F05B 2210/12 (2013.01 - KR); **F05B 2210/14** (2013.01 - KR); **F25B 2400/02** (2013.01 - EP KR US); **Y10S 417/00** (2013.01 - KR)

Cited by
CN109072920A; EP2960501A3; US10935027B2; US9869307B2; WO2013092401A1; WO2017182516A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1798499 A2 20070620; CN 100465438 C 20090304; CN 1982708 A 20070620; JP 2007162561 A 20070628; KR 100748915 B1 20070813;
KR 20070062906 A 20070618; US 2007140870 A1 20070621

DOCDB simple family (application)
EP 06025823 A 20061213; CN 200610168468 A 20061213; JP 2005359352 A 20051213; KR 20060106132 A 20061031;
US 63905306 A 20061213