

Title (en)  
OIL SEPARATOR

Title (de)  
ÖLABSCHEIDER

Title (fr)  
SÉPARATEUR D'HUILE

Publication  
**EP 2413067 A1 20120201 (EN)**

Application  
**EP 10761443 A 20100408**

Priority  
• JP 2010002560 W 20100408  
• JP 2009093930 A 20090408

Abstract (en)  
Provided is an oil separator which can separate refrigerant and refrigeration machine oil with high efficiency, which can effectively prevent the outflow of separated oil towards the refrigerant discharge path side, which can reduce pressure loss in the flow of refrigerant, and which can be made compact especially in the radial direction. The oil separator is provided with: a tubular outer pipe which is disposed on the compressor outlet side; an inlet pipe for introducing refrigerant containing refrigeration machine oil into the tubular outer pipe in such a manner as to produce a downward helical flow of refrigerant containing refrigeration machine oil along the inner surface of the tubular outer pipe; a refrigerant outlet pipe which has an external outflow port for the outflow of refrigerant to outside the tubular outer pipe, has a section extending in the axial direction of the tubular outer pipe at the central position of the tubular outer pipe, and allows the inflow, from the lower end of the above-mentioned section, of refrigerant separated from the refrigerant containing refrigeration machine oil having flowed down in the helical flow, and wherein the flow direction has been inverted in relation to the vertical direction at a first refrigerant inversion part; a refrigerant return pipe which extends in the axial direction of the tubular outer pipe at the central position of the tubular outer pipe, below the refrigerant outlet pipe, and which allows the inflow, from the lower end thereof, of refrigerant separated from the refrigerant containing refrigeration machine oil having flowed down in the helical flow, and wherein the flow direction has been inverted in relation to the vertical direction at a second refrigerant inversion part; and an oil storage part which is formed at the bottom of the tubular outer pipe. Furthermore, a part exhibiting a reflector function for preventing refrigeration machine oil stored in the oil storage part from flowing out into the refrigerant outlet pipe is provided between the refrigerant return pipe and the inner surface of the tubular outer pipe.

IPC 8 full level  
**F25B 43/02** (2006.01); **B04C 5/103** (2006.01); **F25B 1/00** (2006.01)

CPC (source: EP US)  
**B04C 5/103** (2013.01 - EP US); **F25B 43/02** (2013.01 - EP US); **F25B 2400/02** (2013.01 - EP US)

Cited by  
EP3144608A4

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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)  
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