

Title (en)

Control valve for variable displacement compressor

Title (de)

Regelventil für einen Verdichter mit variabler Verdrängung

Title (fr)

Soupape de contrôle pour compresseur de déplacement variable

Publication

**EP 2743504 B1 20151118 (EN)**

Application

**EP 13196256 A 20131209**

Priority

JP 2012270291 A 20121211

Abstract (en)

[origin: EP2743504A1] A control valve (1) includes a body (5) having a main passage communicating a discharge chamber with a crankcase and a sub-passage communicating the crankcase with a suction chamber, a main valve provided in the main valve passage, a sub-valve passage provided in the sub-passage, a pressure-sensing section (6) for receiving the suction pressure of the suction chamber and generating a drive force exerted in an opening direction of a main valve in accordance with the magnitude of the suction pressure, and a solenoid (3) for generating a drive force in a closing direction of the main valve in accordance with the amount of current supplied. A valve-opening mechanism used to open the sub-valve by using the drive force of the solenoid is further included. The outside diameter of the body becomes smaller toward the pressure-sensing section side from the solenoid side. The pressure-sensing section, the main valve, the sub-valve, and the solenoid are arranged in this order from one end side of the body. The sub-valve is provided on a side closer to the solenoid where the outside diameter of the body is larger.

IPC 8 full level

**F04B 27/18** (2006.01)

CPC (source: EP KR)

**F04B 27/14** (2013.01 - KR); **F04B 27/1804** (2013.01 - EP); **F04B 53/10** (2013.01 - KR); **F04B 2027/1813** (2013.01 - EP); **F04B 2027/1827** (2013.01 - EP); **F04B 2027/1831** (2013.01 - EP); **F04B 2027/1859** (2013.01 - EP)

Cited by

EP3040556A1; CN111742141A

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

DOCDB simple family (publication)

**EP 2743504 A1 20140618**; **EP 2743504 B1 20151118**; EP 2916003 A1 20150909; EP 2916003 B1 20160427; EP 2918833 A1 20150916; EP 2918833 B1 20161005; JP 2014114770 A 20140626; JP 6216950 B2 20171025; KR 20140075618 A 20140619; KR 20150006406 A 20150116; KR 20150006407 A 20150116

DOCDB simple family (application)

**EP 13196256 A 20131209**; EP 15153880 A 20131209; EP 15153882 A 20131209; JP 2012270291 A 20121211; KR 20130152491 A 20131209; KR 20140190348 A 20141226; KR 20140190387 A 20141226