

Title (en)

Control valve for variable displacement compressor

Title (de)

Kontrollventil für einen verstellbaren Taumelscheibenkompressor

Title (fr)

Soupape de contrôle pour un compresseur à capacité variable

Publication

EP 1630419 A2 20060301 (EN)

Application

EP 05018104 A 20050819

Priority

- JP 2004251287 A 20040831
- JP 2005021518 A 20050128

Abstract (en)

A valve section 13 of a control valve controls the flow rate between a discharge chamber and a crankcase, based on the differential pressure between discharge pressure Pd and suction pressure Ps. A pressure-sensing section 12 is provided in a high-pressure port 18. When a pressure-sensing piston 19 having a pressure-receiving area larger than a valve element 23 is exposed to a rapid discharge pressure change, the differential pressure generated between the discharge pressure Pd and a pressure in a pressure-adjusting chamber 20 acts on the valve element 23 opposite to the valve-opening/closing direction, to temporarily retard the motion of the valve element 23 which opens or closes by the differential pressure (Pd-Ps). Even a high-sensitivity variable displacement compressor promptly restores without hunting to a predetermined discharge capacity.

IPC 8 full level

F04B 27/18 (2006.01)

CPC (source: EP KR US)

F04B 27/14 (2013.01 - KR); **F04B 27/1804** (2013.01 - EP US); **F04B 49/06** (2013.01 - KR); **F25B 1/00** (2013.01 - KR); **F04B 2027/1813** (2013.01 - EP US); **F04B 2027/1827** (2013.01 - EP US); **F04B 2027/1854** (2013.01 - EP US); **F04B 2027/1859** (2013.01 - EP US)

Cited by

EP2963295A1; EP2963294A1

Designated contracting state (EPC)

DE FR

DOCDB simple family (publication)

EP 1630419 A2 20060301; **EP 1630419 A3 20061018**; JP 2006097673 A 20060413; KR 20060050781 A 20060519; US 2006045758 A1 20060302

DOCDB simple family (application)

EP 05018104 A 20050819; JP 2005021518 A 20050128; KR 20050079729 A 20050830; US 21390205 A 20050830