

Title (en)

Control valve for variable displacement compressor

Title (de)

Kontrollventil für einen verstellbaren Taumelscheibenkompressor

Title (fr)

Souape de contrôle pour un compresseur à capacité variable

Publication

EP 1630419 A3 20061018 (EN)

Application

EP 05018104 A 20050819

Priority

- JP 2004251287 A 20040831
- JP 2005021518 A 20050128

Abstract (en)

[origin: EP1630419A2] 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)

Citation (search report)

- [X] EP 1103721 A2 20010530 - TOYODA AUTOMATIC LOOM WORKS [JP]
- [X] EP 1106831 A2 20010613 - TOYODA AUTOMATIC LOOM WORKS [JP]
- [X] EP 1431578 A2 20040623 - TOYOTA JIDOSHOKKI KK [JP]
- [X] EP 1098091 A2 20010509 - TGK CO LTD [JP]
- [X] US 5071321 A 19911210 - SKINNER TIMOTHY J [US], et al

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EP2963295A1; EP2963294A1

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 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