

Title (en)
Displacement control valve for use in variable displacement compressor

Title (de)
Kontrollventil zur Kapazitätseinstellung eines Verstellkompressors

Title (fr)
Soupape de contrôle d'un compresseur à capacité variable

Publication
EP 0945617 A3 20000202 (EN)

Application
EP 99105008 A 19990319

Priority
JP 10036698 A 19980327

Abstract (en)
[origin: EP0945617A2] For use in a variable displacement compressor having a first and a second passage which are between a crank chamber and a suction chamber and between a discharge chamber and the crank chamber, respectively, a displacement control valve is provided with a first and a second valve mechanism for adjusting opening degrees of the first and the second passages. The second valve mechanism has a valve body which is placed in the second passage and movable in a predetermined direction for opening and closing the second passage with movement thereof in the predetermined direction. The second valve mechanism is provided with a pressure canceling arrangement for making the valve body be canceled with influence of pressure of the second passage in the predetermined direction. A pressure sensing member senses pressure in the first passage. Responsive to the pressure sensed by the pressure sensing member, the first valve mechanism adjusts the opening degree of the first passage. Responsive to an operation of the first valve mechanism, the second valve mechanism adjusts the opening degree of the second passage. Responsive to an external signal, an external operation mechanism operates the first and the second valve mechanisms. <IMAGE>

IPC 1-7
F04B 27/18

IPC 8 full level
F04B 49/08 (2006.01); **F04B 27/14** (2006.01); **F04B 27/18** (2006.01)

CPC (source: EP)
F04B 27/1804 (2013.01); **F04B 2027/1813** (2013.01); **F04B 2027/1827** (2013.01); **F04B 2027/1831** (2013.01); **F04B 2027/1854** (2013.01); **F04B 2027/1859** (2013.01)

Citation (search report)

- [Y] EP 0498552 A1 19920812 - SANDEN CORP [JP]
- [Y] US 5145326 A 19920908 - IMURA KAZUYA [JP], et al
- [DA] US 4606705 A 19860819 - PAREKH DINESH V [US]
- [A] US 5531572 A 19960702 - KIMURA KAZUYA [JP], et al
- [A] DE 19716089 A1 19971106 - TOYODA AUTOMATIC LOOM WORKS [JP]
- [A] WO 9416225 A1 19940721 - TOYODA AUTOMATIC LOOM WORKS [JP], et al

Cited by
US6772990B2; EP0953765A3; EP1091125A3; JP2013108364A; EP3951170A4; CN100370136C; EP1835176A3; EP1333177A1; CN100376793C; US6231314B1; CN102588246A; EP1256718A3; EP2474737A3; US9181937B2; US9631612B2; US8956127B2; US11754194B2; US11821540B2; US11988296B2; US6244159B1; US12031531B2; US7611335B2; US12072035B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 0945617 A2 19990929; **EP 0945617 A3 20000202**; **EP 0945617 B1 20011219**; DE 69900614 D1 20020131; DE 69900614 T2 20020718; JP 4149558 B2 20080910; JP H11280660 A 19991015

DOCDB simple family (application)
EP 99105008 A 19990319; DE 69900614 T 19990319; JP 10036698 A 19980327