

Title (en)  
Control valve for variable displacement compressor

Title (de)  
Regelventil für einen Verdichter variabler Verdrängung

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

Publication  
**EP 1637736 A2 20060322 (EN)**

Application  
**EP 05019466 A 20050907**

Priority  
• JP 2004269661 A 20040916  
• JP 2005161179 A 20050601

Abstract (en)  
A compact control valve for a variable displacement compressor comprises a first valve 11 having a check valve function opening and closing by the differential pressure (Pdh-Pdl), a second valve 12 that opens and closes by sensing the differential pressure (Pdh-Pc), and a solenoid 14 for setting the value of the differential pressure across the first valve 11. The motion of a valve element 20 of the first valve 11 is transmitted via a shaft (29) to a valve element 27 of the second valve 12. The second valve 12 controls the pressure Pc in the crankcase such that the differential pressure across the first valve 11 becomes equal to a fixed value set by the solenoid 14, whereby the flow rate discharged from a compressor outlet port can be controlled to be constant.

IPC 8 full level  
**F04B 27/18** (2006.01); **F04B 49/22** (2006.01)

CPC (source: EP US)  
**F04B 27/1804** (2013.01 - EP US); **F04B 49/225** (2013.01 - EP US); **F04B 2027/1827** (2013.01 - EP US); **F04B 2027/1854** (2013.01 - EP US);  
**F04B 2027/1872** (2013.01 - EP US)

Cited by  
GB2543832A; GB2543832B

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

DOCDB simple family (publication)  
**EP 1637736 A2 20060322**; JP 2006112417 A 20060427; US 2006053812 A1 20060316

DOCDB simple family (application)  
**EP 05019466 A 20050907**; JP 2005161179 A 20050601; US 22280905 A 20050912