

Title (en)

Control valve for variable displacement compressors

Title (de)

Kontrollventil für einen verstellbaren Kompressor

Title (fr)

Soupape de contrôle de débit d'un compresseur à capacité variable

Publication

EP 1026398 A2 20000809 (EN)

Application

EP 00101971 A 20000201

Priority

- JP 2489699 A 19990202
- JP 28982799 A 19991012

Abstract (en)

A control valve (50) located in a compressor to change the displacement of the compressor. The compressor includes a crank chamber (3), the pressure of which is a crank pressure, a suction chamber (8), the pressure of which is a suction pressure. A bleeding passage (53,57,58,59) connects the crank chamber (3) to the suction chamber (8). The control valve (50) is located on the bleeding passage (53,57,58,59) to control the crank pressure by controlling the flow of gas from the crank chamber (3) to the suction chamber (8). A valve seat (54) is located between a crank pressure zone and a suction pressure zone. The valve seat (54) defines a valve hole (55) that connects the crank pressure zone to the suction pressure zone. A valve body (60) is selectively engaged with and disengaged from the valve seat (54) to control an opening size of the valve hole (55). A sensing member (61) is located in the crank pressure zone. The sensing member (61) always urges the valve body (60) toward the valve seat (54), and the sensing member (61) moves in accordance with the crank pressure. The sensing member (61) has a predetermined effective area that is affected by the crank pressure. The effective area is approximately the same the cross sectional area of the valve hole (55). The control valve (50) for compressors that is able to set the suction pressure with precision. <IMAGE>

IPC 1-7

F04B 27/18

IPC 8 full level

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CPC (source: EP)

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Citation (applicant)

JP H0626454 A 19940201 - SAGINOMIYA SEISAKUSHO INC

Cited by

EP1186778A3; EP1895162A4; EP1507109A1; CN100402847C; EP1186777A3; EP1233182A3; US7644729B2; US6739843B2

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