

Title (en)
VARIABLE DISPLACEMENT SWASH PLATE TYPE CLUTCHLESS COMPRESSOR

Title (de)
TAUMELSCHEIBENKOMPRESSOR OHNE KUPPLUNG

Title (fr)
COMPRESSEUR SANS EMBRAYAGE DU TYPE A PLATEAU OSCILLANT A DEPLACEMENT VARIABLE

Publication
EP 1088991 A1 20010404 (EN)

Application
EP 99925334 A 19990616

Priority
• JP 9903203 W 19990616
• JP 18558298 A 19980616

Abstract (en)
When thermal load becomes low, a passage 58 is opened by a control valve 81, whereby the pressure within a crankcase 8 is increased to reduce the inclination angle of a swash plate 10. When the inclination angle of the swash plate 10 becomes minimum, the cross-sectional area of a second passage 57 is reduced by the swash plate 10, whereby the pressure within the crankcase 8 is prevented from being decreased. On the other hand, when the pressure within the crankcase 8 is increased, a refrigerant outlet passage 39a is closed by a check valve 31 serving as a discharge control valve. In view of the fact that the differential pressure between the crankcase 8 and a discharge chamber 12 is smaller and more stable than that between a suction chamber 13 and the discharge chamber 12, the compressor is constructed such that the pressure from the crankcase 8 is caused to act on one side of the check valve 31 serving as a discharge control valve, while the pressure from the discharge chamber 12 is caused to act on the other side of a valve element 31 of the check valve 30, so that it is possible to employ a spring having a relatively small spring force as a spring 32 for urging the spool valve 31 in a valve-closing direction. As a result, even when the pressure within the discharge chamber is progressively lowered with decrease in the thermal load, it is possible to keep the check valve 31 open until the compressor enters the minimum piston stroke condition (extremely low-load operating condition) in which the swash plate 10 reduces the passage area of the first passage. <IMAGE>

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F04B 27/08

IPC 8 full level
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CPC (source: EP)
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Citation (search report)
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Cited by
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