

Title (en)

MULTI-STAGE CAPACITY CONTROL SCROLL COMPRESSOR

Title (de)

SPIRALVERDICHTER MIT MEHRSTUFIGEM MENGENREGLER

Title (fr)

COMPRESSEUR A VOLUTE DE TYPE A COMMANDE DE CAPACITE EN PLUSIEURS ETAPES

Publication

**EP 1004773 A1 20000531 (EN)**

Application

**EP 99922489 A 19990526**

Priority

- JP 9902761 W 19990526
- JP 16502298 A 19980612

Abstract (en)

A first bypass valve (27) that sets discharge capacity to 60% is provided in a first scroll 21 of an asymmetrical spiral-type scroll compressor. Also, a second bypass valve (40) that makes suction side and discharge side communicated with each other so that set load of the compressor becomes 50% is provided outside a scroll of the first scroll (21). In this way, by closing the first and second bypass valves (27, 40), effective load of the compressor is set to 100%. Also, by opening the first bypass valve (27) and concurrently closing the second bypass valve (40), the effective load of the compressor is set to 60%. Further, by opening both the first and second bypass valves (27, 40), the effective load of the compressor is set to 30%. That is, 50% or lower partial load operation with high reliability is performed by setting volume ratio Vr during minimum capacity operation to a value of "1" or more. As a result of this, 50% or lower partial load operation can be changed over in multiple stages. <IMAGE>

IPC 1-7

**F04C 18/02**; **F04C 29/10**

IPC 8 full level

**F04C 18/02** (2006.01); **F04C 29/04** (2006.01); **F04C 28/16** (2006.01); **F04C 28/26** (2006.01); **F04C 29/12** (2006.01)

CPC (source: EP KR)

**F04C 18/02** (2013.01 - KR); **F04C 28/16** (2013.01 - EP); **F04C 18/0215** (2013.01 - EP)

Cited by

EP2025939A3; EP2213879A1; US10428818B2; EP2025939A2; US8328531B2; US10316843B2; US11215181B2; US10428819B2; US11204035B2

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**EP 1004773 A1 20000531**; **EP 1004773 A4 20040512**; **EP 1004773 B1 20101208**; CN 1094566 C 20021120; CN 1272906 A 20001108; DE 69943017 D1 20110120; ES 2356224 T3 20110406; JP 2974009 B1 19991108; JP H11351167 A 19991221; KR 100601270 B1 20060713; KR 20010022824 A 20010326; WO 9964744 A1 19991216

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