

Title (en)
SCROLL COMPRESSOR

Title (de)
SPIRALVERDICHTER

Title (fr)
COMPRESSEUR À SPIRALE

Publication
EP 2541065 A4 20140820 (EN)

Application
EP 10846540 A 20100226

Priority
JP 2010053139 W 20100226

Abstract (en)
[origin: EP2541065A1] [Problem] To provide a scroll compressor which can contribute to reduction in the entire size and the entire weight and has excellent durability and reliability, and which can use a new refrigerant to make ultrahigh speed operation possible. [Means for Resolution] In the scroll compressor, the substrate of an Oldham-coupling ring 107 is made of an aluminum alloy, and a hard DLC layer is formed on the surface of the substrate with interposition of underlayers provided for obtaining excellent adhesion and compensating for hardness so that the weight of the Oldham-coupling ring is reduced by approximately 1/3, compared with the conventional case where the Oldham-coupling ring is made of an iron-based material. Adhesive wear between sliding members are prevented so that improvement in abrasion resistance and reduction in friction coefficient are achieved. As a result, the inertial mass of a rotation system is reduced. Furthermore, an orbiting scroll 101 also has the same material structure so that the eccentric mass of the rotation system is reduced. Thus, the torque load of a motor 100 can be reduced as sufficiently as possible to thereby contribute to reduction in the entire size and the entire weight to obtain excellent durability and reliability. In addition, the scroll compressor can use a new refrigerant to make ultrahigh speed operation possible so that compressing performance equivalent to the case where chlorofluorocarbon is used can be obtained.

IPC 8 full level
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Citation (search report)
• No further relevant documents disclosed
• See references of WO 2011104876A1

Cited by
US9885347B2

Designated contracting state (EPC)
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