

Title (en)
Gas compressor

Title (de)
Gasverdichter

Title (fr)
Compresseur à gaz

Publication
EP 1120568 A3 20010829 (EN)

Application
EP 01201412 A 19960830

Priority
• EP 96306330 A 19960830
• JP 22532595 A 19950901
• JP 24982995 A 19950927
• JP 3395296 A 19960221

Abstract (en)
[origin: EP1120568A2] A valve element (20) is slidably provided midway in an oil passage (18). A discharged jet flow of high pressure refrigerant gas that is from a main body (3) side of the compressor is caused to act on an end face (20a) of the valve element (20). During the compression operation in which the discharged jet flow acts on the valve element (20), by the resulting pressure the valve element (20) is slid against the force of a spring (22) to thereby open the oil passage (18). During the stoppage of the compression operation in which the discharged jet flow is stopped, the valve element (20) is slid by the force of the spring (22) to thereby close the oil passage (18). Thereby, it is possible to prevent a lubricating oil from flowing from an oil pool (17) to a suction chamber (12) side through the oil passage (18) and sliding portions such as an F bearing (4a) and so prevent the occurrence of oil compression in the main body (3) of the compressor at the time of restarting the compression operation. Alternatively, or additionally, a communication passage (23) linking a discharge chamber (16) side to the suction chamber (12) side is provided. A valve element (22) is provided in the communication passage (23) and is arranged to open the communication passage (23) when the compression operation stops and to close the communication passage (23) when the compression operation starts. Thereby, it is possible to equalise the pressure in the discharge chamber (16) and the suction chamber (12) when the compression operation stops and so prevent a lubricating oil from flowing from the oil pool (17) to the suction chamber side (12) through the oil passage (18) and sliding portions and the occurrence of oil compression in the main body (3) of the compressor at the time of restarting the compression operation. <IMAGE>

IPC 1-7
F04C 29/02; F04C 29/10

IPC 8 full level
F04C 29/02 (2006.01)

CPC (source: EP)
F04C 29/021 (2013.01)

Citation (search report)
• [XY] US 2235251 A 19410318 - BOLDT WERNER F
• [Y] EP 0044530 A1 19820127 - CIT ALCATEL [FR]
• [Y] FR 2218491 A1 19740913 - BAUER KOMPRESSOREN [DE]
• [XY] PATENT ABSTRACTS OF JAPAN vol. 009, no. 038 (M - 358) 19 February 1985 (1985-02-19)

Cited by
US8628317B2; US9683570B2; US10371148B2

Designated contracting state (EPC)
DE FR GB NL SE

DOCDB simple family (publication)
EP 1120568 A2 20010801; EP 1120568 A3 20010829; EP 1120568 B1 20041013; DE 69631310 D1 20040219; DE 69631310 T2 20040701;
DE 69633644 D1 20041118; DE 69633644 T2 20050217

DOCDB simple family (application)
EP 01201412 A 19960830; DE 69631310 T 19960830; DE 69633644 T 19960830