

Title (en)
Rotating and reciprocating piston engine.

Title (de)
Dreh-Hubkolben-Maschine.

Title (fr)
Moteur alternatif à pistons tournant.

Publication
EP 0369990 A1 19900523 (DE)

Application
EP 90100552 A 19870403

Priority
CH 131686 A 19860404

Abstract (en)
[origin: WO8705964A1] The rotating and alternating piston machine is an alternating or free piston machine in which the pistons effect a rotating and alternating movement. Main characteristics: 1) the use of rotation or alternation/rotation, for example in order to control the ports provided in the cylinder walls of two- and four-stroke engines, pumps and compressors; 2) simple conversion of rotating and alternating movement by mechanical or electrical means. The rotating and alternating piston machine offers the possibility of: pumps, including the electric drive, in which there is only one rotating part; direct conversion of the alternating movement of the piston into electrical energy; control of the gas movement by the piston; operation of other ports having specific functions (for example, introducing additional compressed gas, discharge ports operating in succession etc.); free selection of the number of piston strokes per rotation; choice of piston stroke kinematics; powerful rotation or swirling of charge; easily designed compact and inexpensive machines; possible integration of a compressor without having to provide for an additional volume and virtually without any weight increase. In the two-stroke combustion engine, in which the gas exchange is controlled by the pistons (2 and 5), the useful power is available at the central shaft (14), which carries the rotating and alternating piston (2) in a longitudinally-slidable but rotationally-fixed manner. Movement is converted by the oscillating shaft (35) and transmission element (38). The engine is provided with four working chambers and has a 100% mass balance.

Abstract (de)
Die Erfindung bezieht sich auf elektromagnetische Vorrichtungen zur Herbeiführung einer Drehbewegung und gleichzeitigen Hubbewegung des Kolbens von Kolbenmaschinen in Verwendung als Kraft- oder Arbeitsmaschinen. Auf diese Weise kann die Kolbenbewegung direkt durch elektrische Energie erzeugt werden, oder es wird elektrische Energie aus der Bewegung des Kolbens erzeugt.

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F01B 3/08; **F02B 75/26**

IPC 8 full level
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Citation (search report)
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• [A] GB 1110084 A 19680418 - FIBORA AG
• [A] EP 0070780 A1 19830126 - BERTIN & CIE [FR]

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WO 8705964 A1 19871008; AT E68556 T1 19911115; AT E97991 T1 19931215; AT E97992 T1 19931215; AU 7209387 A 19871020; CA 1308155 C 19920929; DE 3773724 D1 19911121; DE 3788357 D1 19940113; DE 3788358 D1 19940113; EP 0240467 A1 19871007; EP 0240467 B1 19911016; EP 0369990 A1 19900523; EP 0369990 B1 19931201; EP 0369991 A1 19900523; EP 0369991 B1 19931201; ES 2026942 T3 19920516; ES 2048327 T3 19940316; ES 2048328 T3 19940316; GB 2198788 A 19880622; GB 2198788 B 19901205; GB 2226612 A 19900704; GB 2226612 B 19901205; GB 2226710 A 19900704; GB 2226710 B 19901205; GB 8728277 D0 19880113; GB 8928577 D0 19900221; GB 8928578 D0 19900221; JP H0794801 B2 19951011; JP S63502916 A 19881027; KR 880701314 A 19880726; KR 960000435 B1 19960106; KR 960000436 B1 19960106

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