Title (en)

ROTARY PISTON INTERNAL COMBUSTION ENGINE

Title (de)

ROTATIONSKOLBEN-BRENNKRAFTMASCHINE

Title (fr)

MOTEUR À COMBUSTION INTERNE À PISTONS ROTATIFS

Publication

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Application

EP 10702820 A 20100122

Priority

- EP 2010000358 W 20100122
- DE 102009008205 A 20090204

Abstract (en)

[origin: WO2010089030A2] 1.1 Previously unsolved problems for an internal combustion engine having two piston pairs rotating about a central axis are the effective sealing of the chambers from each other, and engine control. The aim of the invention is to solve said problems and additionally provide for efficient lubrication and cooling of the engine. 2.2 The invention relates to two piston pairs Fig. 1.1, each on a piston disc (5), (6) form a recurring working position in an top and a bottom dead center position (UT, OT). Chambers (26 - 29) are formed by means of two pintles (48) at the end faces of the piston and having perpendicular and trapezoidal sealing elements, together with piston rings in the piston disc within a ring-shaped cylinder. The sealing elements of a piston are pressed against the sealing rings of the piston disc and the inner surface of the ring-shaped cylinder by at least one wave spring (175). While a piston pair remains still during sensor-controlled ignition of the fuel-air mixture, the second piston pair is rotated further, together with the working shaft, by a crank angle of 90°/60°/36°, and all working cycles of a four-stroke engine are performed. After another 135°/120°/108°, a new work cycle occurs. The starting process of the engine can be performed by sensors without contact, both by two external, conventional starters, using segments of a circle, and by two internal electronically commutated motors having magnetic discs and controls electronics. By solving said problems, said engine can not only be used universally as a stand-alone, but also as a hybrid engine and hybrid and generator drive. Further advantages result from the fact that the compression can be controlled by means of the pressure limit valve (52).

IPC 8 full level

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CPC (source: EP)

F01C 1/063 (2013.01); **F01C 21/04** (2013.01); **F01C 21/0809** (2013.01)

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Cited by

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