Title (en)

ROTARY PISTON MACHINE WITH AN OVAL ROTARY PISTON GUIDED IN AN OVAL CHAMBER

Title (de)

ROTATIONSKOLBENMASCHINE MIT EINEM IN EINER OVALEN KAMMER GEFÜHRTEN OVALEN ROTATIONSKOLBEN

Title (fr)

MACHINE A PISTON ROTATIF COMPRENANT UN PISTON ROTATIF OVAL GUIDE DANS UNE CHAMBRE OVALE

Publication

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Application

EP 04714747 A 20040226

Priority

- EP 2004001921 W 20040226
- DE 10308831 A 20030227

Abstract (en)

[origin: WO2004076819A2] A rotary piston machine comprising a prismatic chamber (12) disposed in a housing (10), the cross-section of said chamber being oval-shaped. A rotary piston (22) can move in the chamber (12), the cross-section of said piston also being oval-shaped. The order of the oval of the chamber (12) is lower than the order of the oval of the rotary piston (22). The rotary piston (22) rotates alternately in successive movement sections around various axes of rotation, respectively from one stop position to the next. During rotation, the rotary piston is adjacent to the inner wall of the chamber (22) in each position, forming two working chambers (80,82). The rotary piston (22) comprises an opening with inner toothing (56).The inner toothing (56) engages with a toothed arrangement for driving the rotary movement. The opening (36) is, mathematically speaking, essentially similar to the rotary piston (22). The planes of symmetry (50,52,54) of the opening (36) coincide with those of the rotary piston (22). The toothed arrangement comprises a pair of shafts (70,72) which are fixed to the housing and provided with external toothing (74,76) which engages with the inner toothing (56) of the opening (36). In each movement section, one shaft (e.g. 70) is respectively arranged in the region of a section (28) of the opening which has a smaller radius of curvature and the other shaft (72) is arranged in the region of a section (46) having a higher radius of curvature. The shafts are actively interchangeable in successive movement sections.

IPC 8 full level

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