

Title (en)  
PLANETARY PISTON INTERNAL COMBUSTION ENGINE

Publication  
**EP 0435878 B1 19930526 (DE)**

Application  
**EP 89909186 A 19890812**

Priority  
DE 3827621 A 19880814

Abstract (en)  
[origin: WO9001676A1] Planetary piston internal combustion engine with a housing, inside which at least two multiple pistons with two partial pistons each, mounted on corresponding piston bearings, are actuated by a control mechanism to move on a circular path in such a manner that operational spaces are created between each pair of pistons and the housing, complete four-stroke cycles thus being generated in each operational space. The housing and the piston bearings delimit the radial sealing grooves situated in the corners of the operational spaces. The operational spaces are sealed in a safe manner by a sealing system which includes a peripheral seal, sealing off the housing from the piston bearing and subjected to pressure in the direction of the operational space, and a piston seal on the partial pistons operating radially and axially and cooperating with the former. The piston seal includes at least two sealing arrangements spaced apart in the peripheral direction, which can move independently of each other and form sealing planes. Each sealing arrangement in the corresponding sealing plane comprises at least two sealing elements with a wedge-shaped design at least on their facing sides and a pressure block applying axial and radial pressure on the sealing elements in the sealing direction. The sealing arrangements of the piston seal are mutually offset in such a manner that the space between the sealing elements of a sealing arrangement in which the corresponding pressure block is received is completely covered by a continuous sealing element of the next sealing arrangement. To apply pressure on the peripheral seal, the peripheral sealing grooves are connected to the operational space subjected to the highest pressure, for example via a through-hole.

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