

Title (en)
Rotary internal combustion engine.

Title (de)
Drehkolben-Brennkraftmaschine.

Title (fr)
Machine rotative à combustion interne.

Publication
EP 0307515 A1 19890322 (EN)

Application
EP 87201763 A 19870917

Priority
EP 87201763 A 19870917

Abstract (en)
A Rotary Internal Combustion Engine, including all types of vehicles and equipments or apparatus provided with Rotary Internal Combustion Engines and or Rotary Equipments/machines, which principally consist of arched bi-apex Rotor with arcaded inner surface Housing of epicyclic forms, and arched tri-apex Rotor with arcaded bi-lobed Housing of epitrochoidal form. In such rotary engine, the Rotor (21 of Fig.3) is integrated its rotations with the rotations of the Maincrankshaft (24 of Fig. 3) through the intermeshing gears train (37, 38, 47, 51, 52, 48 of Fig. 3) by which the Rotor will be rotated or rotates in accordance to the basic speed ratio (1 : 2 for the bi-apex Rotor and 1 : 3 for the tri-apex Rotor) so thereafter the Rotor will rotates to the effective clearance during all relative rotations and maintain such permanent distance between the cooperating shapes of the stationary outer components and the rotating inner component, which distance will be use for inserting the proper sealing rings/elements of the same arched type of 180 degrees, so therefore such construction will be able to seal the working chambers accordingly, and avoiding any possibility of direct contact between the Rotor arched apex portions and the arcaded inner Housing wall, so therefore such conditions will able to maintain the minimum wearing rate between the moving parts as mentioned above, to the normal rate for engine durability. Further the pitch diameter of the Maincrankshaft is also constructed larger than the conventional pitch diameter of such similar engines and therefore will be able to avoid vibrations and carry more loads if required provided with the same dimensions of Rotor and its Housing. Such larger pitch diameter of the Maincrankshaft is made possible because the pitch diameter and its intermeshing pinion gear are also made and constructed larger than the conventional design as caused by using larger gearing ratio of 3 : 2 instead of 2 : 1 for bi-apex Rotor and gearing ratio of 4 : 3 instead of 3 : 2 for the tri-apex Rotor type.

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F01C 1/22

IPC 8 full level
F01C 1/22 (2006.01); **F02B 3/06** (2006.01)

CPC (source: EP KR)
F01C 1/00 (2013.01 - KR); **F01C 1/22** (2013.01 - EP); **F02B 3/06** (2013.01 - EP); **F02B 2053/005** (2013.01 - EP)

Citation (search report)
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Designated contracting state (EPC)
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