

Title (en)  
Hydraulic energy-conversion device.

Title (de)  
Anlage zur Umwandlung hydraulischer Energie.

Title (fr)  
Appareil de conversion d'énergie hydraulique.

Publication  
**EP 0119460 A2 19840926 (EN)**

Application  
**EP 84101477 A 19840214**

Priority  
US 46721683 A 19830217

Abstract (en)  
A device capable of functioning as a fluid pump or motor has a shaft provided with an eccentric (48) rotating with the shaft in an axially short cylindrical chamber (47). A ring (57) is rotatable on the eccentric, the thickness of the ring being close enough to the minimum distance from the periphery of the eccentric to the wall of the cylindrical chamber to cause the ring to roll along the wall on rotation of the shaft. The presence of the bearing (56) interposed between the ring and the eccentric has the effect of adding to the thickness of the ring in this relationship. A high pressure (59) and a low pressure port (60) are closely spaced about the chamber periphery, and a moveable dam (64) is mounted between these ports. A second moveable dam (69) is mounted on the opposite side of the high-pressure port from the the first dam. A valve and a related hydraulic circuit control the relationship of the case pressure to the pressure in the high-pressure port, and another system suppresses pressure pulsations otherwise arising from the sequential operation of one or more of the sections of the device. Mechanical provision is made for providing greater axial length of roller bearing engagement against the convex surface of the eccentric than is present on the concave inner surface of the ring. The shaft is balanced by recesses (53a, 53b) in the eccentric, and these are surrounded by a continuous sleeve (55) functioning as the inner bearing race.

IPC 1-7  
**F04C 2/46**; **F04C 15/00**

IPC 8 full level  
**F16C 3/06** (2006.01); **F04C 2/38** (2006.01); **F04C 2/46** (2006.01); **F04C 15/00** (2006.01)

CPC (source: EP)  
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