

Title (en)

REVERSIBLE GEAR MACHINE (MOTOR OR PUMP)

Publication

EP 0093917 B1 19870708 (DE)

Application

EP 83103941 A 19830422

Priority

DE 3217753 A 19820512

Abstract (en)

[origin: US4465444A] A reversible gear machine which can be used either as a gear pump or as a gear motor regardless of the pressure gradient direction between its inlet and outlet ports includes a housing accommodating meshing gears for rotation about their respective axes which are defined by respective stub shafts extending axially beyond the end faces of the gears. At least one pressure element, which may be constituted by bearing members for the stub shafts, and which is movable axially of the respective stub shafts, has a surface facing away from the gears. A sealing component including a relatively rigid support ring and an elastically yieldable sealing body is accommodated in a groove of the sealing element provided at the aforementioned surface of the latter, such that the support ring contacts the close end wall of the housing and a rib of the sealing body contacts the bottom of the groove and subdivides the latter into two compartments. The sealing component delimits on the aforementioned surface of the sealing element first and second pressure fields which are in communication with the respective ports of the gear machine, and third pressure fields which are situated between the sealing component and the respective stub shafts and which are subjected to the pressure prevailing between the other axial surface of the pressing element inwardly of the root circle of the gear teeth and outwardly of the respective stub shafts. Two of the pressing elements and two of the sealing components may be provided, each at one axial side of the gears.

IPC 1-7

F04C 2/18; F04C 15/00

IPC 8 full level

F04C 2/18 (2006.01); **F04C 15/00** (2006.01)

CPC (source: EP US)

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