

Title (en)  
SCROLL-TYPE FLUID DISPLACEMENT DEVICE HAVING HIGH BUILT-IN VOLUME RATIO AND SEMI-COMPLIANT BIASING MECHANISM

Title (de)  
VERDRÄNGERMASCHINE NACH DEM SPIRALPRINZIP

Title (fr)  
DISPOSITIF DE DEPLACEMENT DE FLUIDE DU TYPE A SPIRALES A RAPPORT ELEVE DE VOLUMES PROPRES ET MECANISME DE PRESSION SEMI-ELASTIQUE

Publication  
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Appication  
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Priority  
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Abstract (en)  
[origin: WO9520719A1] A scroll-type fluid displacement apparatus has two interfitting spiral-shaped scroll members (50, 60) which have predetermined geometric configurations. The novel design provides desired displacement and a high built-in volume ratio, while at the same time achieving the optimum number of turns. The two scroll members can be either identical (Fig. 8) or non-identical (Fig. 9). One scroll member (60) is non-orbital and movable along its center axis (S2). The non-orbital scroll member is urged by forces, mechanical (70) or pneumatic (496), toward the other scroll member and is stopped by a positioning mechanism (24) such that gaps (65) are maintained between tips of one scroll member and bases (51, 61) of the other scroll member. A stabilizing mechanism (162, 20, 261, 362, 466) prevents the scroll members from tipping. When abnormal operating conditions arise, for example, when contaminants or incompressible liquids move between the scroll members, or, when the tips and bases of the scroll members contact each other due to abnormal thermal growth, the non-orbital scroll member moves against the urging force along the direction of its center axis. Thus, galling may be prevented.

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